

1/125

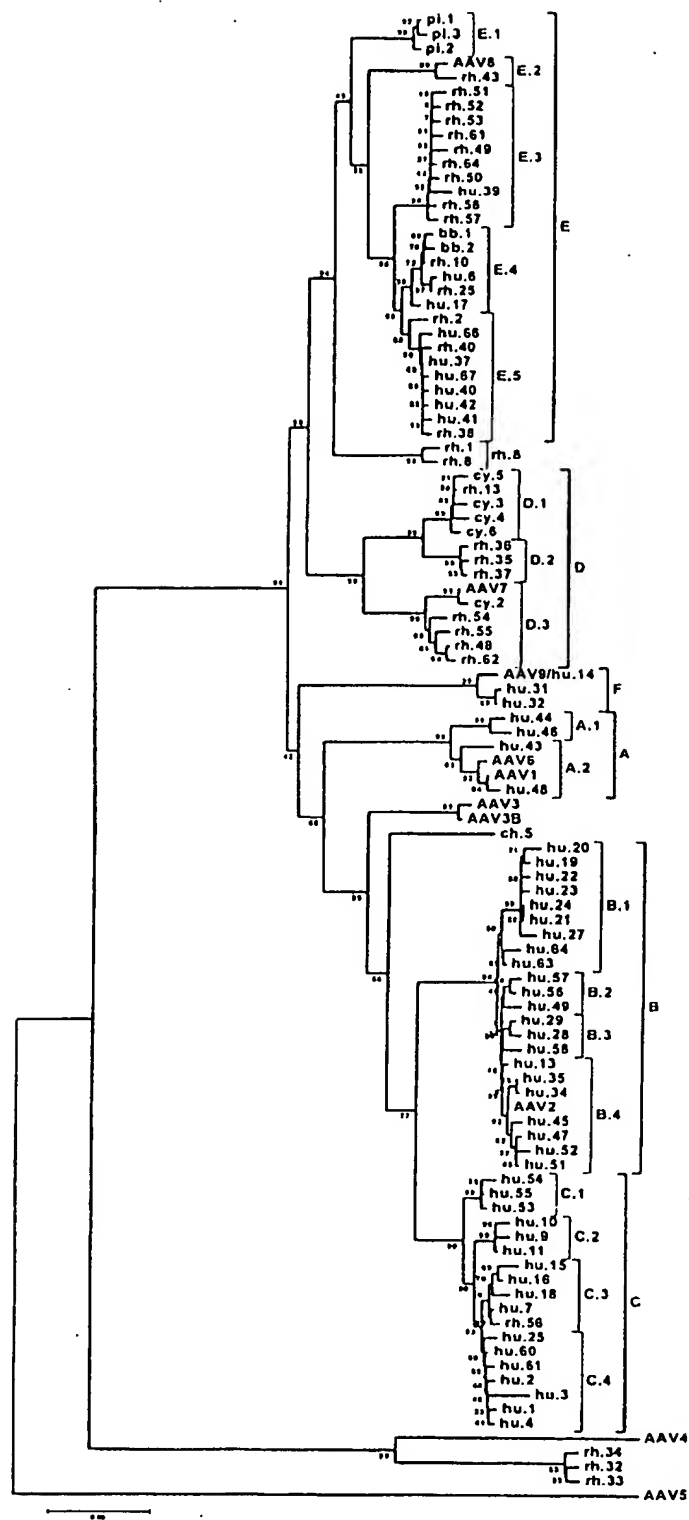


FIG. 1

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	10	20	30	40	50	60	70
AAV5	1	..... ..... ..... ..... ..... ..... ..... ..... ..... .....	MSFVDHPPDWLEE-VGEGREFLGLEAGPPKPKPNQHQHQDQARGLVLPGYNYLGPNGGLDRGEPVNRAD				
AAV3-3	1	MAADGYLPDWLEDNLSEGIREWALKPGVPQPKANQHQHQDNRRLGLVLPGYKYLPGNGLDKGEPVNEAD					
AAV4-4	1	-MTDGYLPDWLEDNLSEGVREWWALQPGAPKPKANQHQHQDNARGLVLPGYKYLPGNGLDKGEPVNAAD					
AAV1-A	1	MAADGYLPDWLEDNLSEGIREWWDLKPAPKPKANQKQDDGRGLVLPGYKYLPGFNGLDKGEPVNAAD					
hu.46-A	1	MAADGYLPDWLEDNLSEGIQWVKLKPGLPPPKPAERHKDDSRGLVLPGYKYLPGFNGLDKGEPVNEAD					
hu.48-A	1	MAADGYLPDWLEDNLSEGIREWWDLKPAPKPKANQKQDDGRGLVLPGYKYLPGFNGLDKGEPVNAAD					
hu.44-A	1	MAADGYLPDWLEDNLSEGIQWVKLKPGLPPPKPAERHKDDSRGLVLPGYKYLPGFNGLDKGEPVNEAD					
hu.43-A	1	MAADGYLPDWLEDNLSEGIREWWDLKPAPKPKANQKQDDGRGLVLPGYKYLPGFNGLDKGEPVNAAD					
AAV6-A	1	MAADGYLPDWLEDNLSEGIREWWDLKPAPKPKANQKQDDGRGLVLPGYKYLPGFNGLDKGEPVNAAD					
hu.34-B	1	MAADGYLPDWLEDNLSEGIQWVKLKPGLPPPKPAERHKDDSRGLVLPGYKYLPGFNGLDKGEPVNEAD					
hu.47-B	1	MAADGYLPDWLEDNLSEGIQWVKLKPGLPPPKPAERHKDDSRGLVLPGYKYLPGFNGLDKGEPVNEAD					
hu.29-B	1	MAADGYLPDWLEDNLSEGIQWVKLKPGLPPPKPAERHKDDSRGLVLPGYKYLPGFNGLDKGEPVNEAD					
hu.63-B	1	MAADGYLPDWLEDNLSEGIQWVKLKPGLPPPKPAERHKDDSRGLVLPGYKYLPGFNGLDKGEPVNEAD					
hu.56-B	1	MAADGYLPDWLEDNLSEGIQWVKLKPGLPPPKPAERHKDDSRGLVLPGYKYLPGFNGLDKGEPVNEAD					
hu.45-B	1	MAADGYLPDWLEDNLSEGIQWVKLKPGLPPPKPAERHKDDSRGLVLPGYKYLPGFNGLDKGEPVNEAD					
hu.57-B	1	MAADGYLPDWLEDNLSEGIQWVKLKPGLPPPKPAERHKDDSRGLVLPGYKYLPGFNGLDKGEPVNEAD					
hu.35-B	1	MAADGYLPDWLEDNLSEGIQWVKLKPGLPPPKPAERHKDDSRGLVLPGYKYLPGFNGLDKGEPVNEAD					
hu.58-B	1	MAADGYLPDWLEDNLSEGIQWVKLKPGLPPPKPAERHKDDSRGLVLPGYKYLPGFNGLDKGEPVNEAD					
hu.28-B	1	MAADGYLPDWLEDNLSEGIQWVKLKPGLPPPKPAERHKDDSRGLVLPGYKYLPGFNGLDKGEPVNEAD					
hu.51-B	1	MAADGYLPDWLEDNLSEGIQWVKLKPGLPPPKPAERHKDDSRGLVLPGYKYLPGFNGLDKGEPVNEAD					
hu.19-B	1	MAADGYLPDWLEDNLSEGIQWVKLKPGLPPPKPAERHKDDSRGLVLPGYKYLPGFNGLDKGEPVNEAD					
hu.49-B	1	MAADGYLPDWLEDNLSEGIQWVKLKPGLPPPKPAERHKDDSRGLVLPGYKYLPGFNGLDKGEPVNEAD					
hu.52-B	1	MAADGYLPDWLEDNLSEGIQWVKLKPGLPPPKPAERHKDDSRGLVLPGYKYLPGFNGLDKGEPVNEAD					
hu.13-B	1	MAADGYLPDWLEDNLSEGIQWVKLKPGLPPPKPAERHKDDSRGLVLPGYKYLPGFNGLDKGEPVNEAD					
AAV2-B	1	MAADGYLPDWLEDNLSEGIQWVKLKPGLPPPKPAERHKDDSRGLVLPGYKYLPGFNGLDKGEPVNEAD					
hu.20-B	1	MAADGYLPDWLEDNLSEGIQWVKLKPGLPPPKPAERHKDDSRGLVLPGYKYLPGFNGLDKGEPVNEAD					
hu.24-B	1	MAADGYLPDWLEDNLSEGIQWVKLKPGLPPPKPAERHKDDSRGLVLPGYKYLPGFNGLDKGEPVNEAD					
hu.64-B	1	MAADGYLPDWLEDNLSEGIQWVKLKPGLPPPKPAERHKDDSRGLVLPGYKYLPGFNGLDKGEPVNEAD					

FIG. 2A

hu. 27-B	1	MAADGYLPDWLEDTLSEGIQWQWKLKPGPPPPKPAERHKDDSRGLVLPGYKYLGPFFNGLDKGEPVNEADA
hu. 21-B	1	MAADGYLPDWLEDTLSEGIQWQWKLKPGPPPPKPAERHKDDSRGLVLPGYKYLGPFFNGLDKGEPVNEADA
hu. 22-B	1	MAADGYLPDWLEDTLSEGIQWQWKLKPGPPPPKPAERHKDDSRGLVLPGYKYLGPFFNGLDKGEPVNEADA
hu. 23-B	1	MAADGYLPDWLEDTLSEGIQWQWKLKPGPPPPKPAERHKDDSRGLVLPGYKYLGPFFNGLDKGEPVNEADA
hu. 7-C	1	MAADGYLPDWLEDTLSEGIQWQWKLKPGPPPPKPAERHKDDSRGLVLPGYKYLGPFFNGLDKGEPVNEADA
hu. 61-C	1	MAADGYLPDWLEDTLSEGIQWQWKLKPGPPPPKPAERHKDDSRGLVLPGYKYLGPFFNGLDKGEPVNEADA
rh. 56-C	1	MAADGYLPDWLEDTLSEGIQWQWKLKPGPPPPKPAERHKDDSRGLVLPGYKYLGPFFNGLDKGEPVNEADA
hu. 9-C	1	MAADGYLPDWLEDTLSEGIQWQWKLKPGPPPPKPAERHQDNRGLVLPGYKYLGPFFNGLDKGEPVNEADA
hu. 54-C	1	MAADGYLPDWLEDTLSEGIQWQWKLKPGPPPPKPAERHKDDSRGLVLPGYKYLGPFFNGLDKGEPVNEADA
hu. 53-C	1	MAADGYLPDWLEDTLSEGIQWQWKLKPGPPPPKPAERHKDDSRGLVLPGYKYLGPFFNGLDKGEPVNEADA
hu. 60-C	1	MAADGYLPDWLEDTLSEGIQWQWKLKPGPPPPKPAERHKDDSRGLVLPGYKYLGPFFNGLDKGEPVNEADA
hu. 55-C	1	MAADGYLPDWLEDTLSEGIQWQWKLKPGPPPPKPAERHKDDSRGLVLPGYKYLGPFFNGLDKGEPVNEADA
hu. 2-C	1	MAADGYLPDWLEDTLSEGIQWQWKLKPGPPPPKPAERHKDDSRGLVLPGYKYLGPFFNGLDKGEPVNEADA
hu. 1-C	1	MAADGYLPDWLEDTLSEGIQWQWKLKPGPPPPKPAERHKDDSRGLVLPGYKYLGPFFNGLDKGEPVNEADA
hu. 18-C	1	MAADGYLPDWLEDTLSEGIQWQWKLKPGPPPPKPAERHKDDSRGLVLPGYKYLGPFFNGLDKGEPVNEADA
hu. 3-C	1	MAADGYLPDWLEDTLSEGIQWQWKLKPGPPPPKPAERHKDDSRGLVLPGYKYLGPFFNGLDKGEPVNEADA
hu. 25-C	1	MAADGYLPDWLEDTLSEGIQWQWKLKPGPPPPKPAERHKDGSRLVLPGYKYLGPFFNGLDKGEPVNEADA
hu. 15-C	1	MAADGYLPDWLEDTLSEGIQWQWKLKPGPPPPKPAERHKDDSRGLVLPGYKYLGPFFNGLYKGEVDEADA
hu. 16-C	1	MAADGYLPDWLEDTLSEGIQWQWKLKPGPPPPKPAERHKDDSRGLVLPGYKYLGPFFNGLYKGEVNEADA
hu. 11-C	1	MAADGYLPDWLEDTLSEGIQWQWKLKPGPPPPKPAERHQDSDSRGLVLPGYKYLGPFFNGLDKGEPVNEADA
hu. 10-C	1	MAADGYLPDWLEDTLSEGIQWQWKLKPGPPPPKLAERHQDSDSRGLVLPGYKYLGPFFNGLDKGEPVNEADA
hu. 4-C	1	MAADGYLPDWLEDTLSEGIQWQWKLKPGPPPPKPAERHKDDSRGLVLPGYKYLGPFFNGLDKGEPVNEADA
rh. 54-D	1	MAADGYLPDWLEDTLSEIREWWDLKPAPKPKANQKQDDGRGLVLPGYKYLGPFFNGLDKGEPVNAADA
rh. 48-D	1	MAADGYLPDWLEDTLSEIREWWDLKPAPKPKANQKQDDGRGLVLPGYKYLGPFFNGLDKGEPVNAADA
rh. 55-D	1	MAADGYLPDWLEDTLSEIREWWDLKPAPKPKANQKQDDGRGLVLPGYKYLGPFFNGLDKGEPVNAADA
rh. 62-D	1	MAADGYLPDWLEDTLSEIREWWDLKPAPKPKANQKQDDGRGLVLPGYKYLGPFFNGLDKGEPVNAADA
AAV7-D	1	MAADGYLPDWLEDTLSEIREWWDLKPAPKPKANQKQDDGRGLVLPGYKYLGPFFNGLDKGEPVNAADA
rh. 52-E	1	MAADGYLPDWLEDTLSEIREWWDLKPAPKPKANQKQDDGRGLVLPGYKYLGPFFNGLDKGEPVNAADA
rh. 51-E	1	MVADGYLPDWLEDTLSEIREWWDLKPAPKPKANQKQDDGRGLVLPGYKYLGPFFNGLDKGEPVNAADA
hu. 39-E	1	MAADGYLPDWLEDTLSEIREWWDLKPAPKPKANQKQDDGRGLVLPGYKYLGPFFNGLDKGEPVNAADA

[illegible]

FIG. 2C



hu. 48-A 71 AALEHDKAYDQQLKAGDNPYLRYNHADADEFQERLQEDTSFGGNLGRAVFQAKKRVLEPLG-LVEEGAKTA  
hu. 44-A 71 AALEHDKAYDRQLDSDGNPYLYKNHADADEFQERLKEDTSFGGNLGRAVFQAKKRVLEPLG-LVEEGAETA  
hu. 43-A 71 AALEHDKAYDQQLKAGDNPYPKYNHADADEFQERLQEDTSFGGNLGRAVFQAKKRVLEPLG-LVEEAAKTA  
AAV6-A 71 AALEHDKAYDQQLKAGDNPYLRYNHADADEFQERLQEDTSFGGNLGRAVFQAKKRVLEPFG-LVEEGAKTA  
hu. 34-B 71 AALEHDKAYDRQLDSDGNPYLYKNHADADEFQERLKEDTSFGGNLGRAVFQAKKRVLEPLG-LVEEPPVKA  
hu. 47-B 71 AALEHDKAYDRQLDSDGNPYLYKNHADADEFQERLKEDTSFGGNLGRAVFQAKKRVLEPLG-LVGEPPVKA  
hu. 29-B 71 AALEHDKAYDRQLDSDGNPYLYKNHADADEFQERLKEDTSFGGNLGRAVFQAKKRVLEPLG-LVEEPPVKA  
hu. 63-B 71 AALEHDKAYDRQLDSDGNPYLYKNHADADEFQERLKEDTSFGGNLGRAVFQAKKRVLEPLG-LVEEPPVKA  
hu. 56-B 71 AALEHDKAYDRQLDSDGNPYLYKNHADADEFQERLKEDTSFGGNLGRAVFQAKKRVLEPLG-LVEEPPVKA  
hu. 45-B 71 AALEHDKAYDRQLDSDGNPYLYKNHADADEFQERLKEDTSFGGNLGRAVFQAKKRVLEPLG-LVEEPPVKA  
hu. 57-B 70 AALEHDKAYDRQLDSDGNPYLYKNHADADEFQERLKEDTSFGGNLGRAVFQAKKRVLEPLG-LVEEPPVKA  
hu. 35-B 71 AALEHDKAYDRQLDSDGNPYLYKNHADADEFQERLKEDTSFGGNLGRAVFQAKKRVLEPLG-LVEEPPVKA  
hu. 58-B 71 AALEHDKAYDRQLDSDGNPYLYKYNHADADEFQERLKEDTSFGGNLGRAVFQAKKRVLEPLG-LVEEPPVKA  
hu. 28-B 71 AALEHDKAYDRQLDSDGNPYLYKNHADADEFQERLKEDTSFGGNLGRAVFQAKKRVLEPLS-LVEEPPVKA  
hu. 51-B 71 AALEHDKAYDRQLDSDGNPYLYKNHADADEFQERLKEDTSFGGNLGRAVFQAKKRVLEPLG-LVGEPPVKA  
hu. 19-B 71 AALEHDKAYDRQLDSDGNPYLYKNHADADEFQERLKEDTSFGGNLGRAVFQAKKRVLEPLG-LVEEPPVKA  
hu. 49-B 71 AALEYDKAYDRQLDSDGNPYLYKNHADADEFQERLKEDTSFGGNLGRAVFQAKKRVLEPLG-LVEEPPVKA  
hu. 52-B 71 AALEHDKAYDRQLDSDGNPYLYKNHADADEFQERLKEDTSFGGNLGRAVFQAKKRVLEPLG-LVGEPPVKA  
hu. 13-B 71 AALEHDKAYDRQLDSDGNPYLYKNHADADEFQERLKEDTSFGGNLGRAVFQAKKRVLEPLG-LVEEPPVKA  
AAV2-B 71 AALEHDKAYDRQLDSDGNPYLYKNHADADEFQERLKEDTSFGGNLGRAVFQAKKRVLEPLG-LVEEPPVKA  
hu. 20-B 71 AALEHDKAYDRQLDSDGNPYLYKNHADADEFQERLKEDTSFGGNLGRAVFQAKKRVLEPLG-LVEEPPVKA  
hu. 24-B 71 AALEHDKAYDRQLDSDGNPYLYKNHADADEFQERLKEDTSFGGNLGRAVFQAKKRVLEPLG-LVEEPPVKA  
hu. 64-B 71 AALEHDKAYDRQLDSDGNPYLYKNHADADEFQERLKEDTSFGGNLGRAVFQAKKRVLEPLG-LVEEPPVKA  
hu. 27-B 71 AALEHDKAYDRQLDSDGNPYLYKNHADADEFQERLKEDTSFGGNLGRAVFQAKKRVLEPLG-LVEEPPVKA  
hu. 21-B 71 AALEHDKAYDRQLDSDGNPYLYKNHADADEFQERLKEDTSFGGNLGRAVFQAKKRVLEPLG-LVEEPPVKA  
hu. 22-B 71 AALEHDKAYDRQLDSDGNPYLYKNHADADEFQERLKEDTSFGGNLGRAVFQAKKRVLEPLG-LVEEPPVKA  
hu. 23-B 71 AALEHDKAYDRQLDSDGNPYLYKNHADADEFQERLKEDTSFGGNLGRAVFQAKKRVLEPLG-LVEEPPVKA  
hu. 7-C 71 AALEHDKAYDRQLDSDGNPYLYKNHADADEFQERLKEDTSFGGNLGRAVFQAKKRVLEPLG-LVEEPPVKA  
hu. 61-C 71 AALEHDKAYDRQLDSDGNPYLYKNHADADEFQERLKEDTSFGGNLGRAVFQAKKRVLEPLG-LVEEPPVKA  
rh. 56-C 71 AALEHDKAYDRQLDSDGNPYLYKNHADADEFQERLKEDTSFGGNLGRAVFQAKKRVLEPLG-LVEEPPVKA

FIG. 2D

hu. 9-C	71	AALEHDKAYDRQLDSDGNP	YLKYNHADA	AEFQERL	KEDTSFG	GNLGRA	VFQAK	KRVLE	PLG-LVEE	PVKTA
hu. 54-C	71	AALEHDKAYDRQLDSDGNP	YLKYNHADA	AEFQERL	KEDTSFG	GNLGRA	VFQAK	KRVLE	PLG-LVEE	PVKTA
hu. 53-C	71	AALEHDKAYDRQLDSDGNP	YLKYNHADA	AEFQERL	KEDTSFG	GNLGRA	VFQAK	KRVLE	PLG-LVEE	PVKTA
hu. 60-C	71	AALEHDKAYDRQLDSDGNP	YLKYNHADA	AEFQERL	KEDTSFG	GNLGRA	VFQAK	KRVLE	PLG-LVEE	PVKTA
hu. 55-C	71	AALEHDKAYDRQLDSDGNP	YLKYNHADA	AEFQERL	KEDTSFG	GNLGRA	VFQAK	KRVLE	PLG-LVEE	PVKTA
hu. 2-C	71	AALEHDKAYDRQLDSDGNP	YLKYNHADA	AEFQERL	KEDTSFG	GNLGRA	VFQAK	KRVLE	PLG-LVEE	PVKTA
hu. 1-C	71	AALEHDKAYDRQLDSDGNP	YLKYNHADA	AEFQERL	KEDTSFG	GNLGRA	VFQAK	KRVLE	PLG-LVEE	PVKTA
hu. 18-C	71	AALEHDKAYDRQLDSDGNP	YLKYNHADA	AEFQERL	KEDTSFG	GNLGRA	VFQAK	KRVLE	PLG-LVEE	PVKTA
hu. 3-C	71	AALEHDKAYDRQLDSDGNP	YLKYNHADA	AEFQERL	KEDTSFG	GNLGRA	VFQAK	KRVLE	PLRPLR	GLRKPVKTA
hu. 25-C	71	AALEHDKAYDRQLNSGNP	YLKYNHADA	AEFQERL	KEDTSFG	GNLGRA	VFQAK	KRVLE	PLG-LVEE	PVKTA
hu. 15-C	71	AALEHDKAYDRQLDSDGNP	YLKYNHADA	AEFQERL	KEDTSFG	GNLGRA	VFQAK	KRVLE	PLG-LVGE	PVKTA
hu. 16-C	71	AALEHDKAYDRQLDSDGNP	YLKYNHADA	AEFQERL	KEDTSFG	GNLGRA	VFQAK	KRVLE	PLG-LVEE	PVKTA
hu. 11-C	71	AALEHDKAYDRQLDSDGNP	YLKYNHADA	AEFQERL	KEDTSFG	GNLGRA	VFQAK	KRVLE	PLG-LVEE	PVKTA
hu. 10-C	71	AALEHDKAYDRQLDSDGNP	YLKYNHADA	AEFQERL	KEDTSFG	GNLGRA	VFQAK	KRVLE	PLG-LVEE	PVKTA
hu. 4-C	71	AALEHDKAYDRQLDSDGNP	YLKYNHADA	AEFQERL	KEDTSFG	GNLGRA	VFQAK	KRVLE	PLG-LVEE	PVKTA
rh. 54-D	71	AALEHDKAYDQQLKAGDN	PYLRYNHADA	AEFQERL	QEDTSFG	GNLGRA	VFQAK	KRVLE	PLG-LVEE	AAKTA
rh. 48-D	71	AALEHDKAYDQQLKAGDN	PYLRYNHADA	AEFQERL	QEDTSFG	GNLGRA	VFQAK	KRVLE	PLG-LVEE	AAKTA
rh. 55-D	71	AALEHDKAYDQQLKAGDN	PYLRYNHADA	AEFQERL	QEDTSFG	GNLGRA	VFQAK	KRVLE	PLG-LVEE	EGAKTA
rh. 62-D	71	AALEHDKAYDQQLKAGDN	PYLRYNHADA	AEFQERL	QEDTSFG	GNLGRA	VFQAK	KRVLE	PLG-LAEE	AAKTA
AAV7-D	71	AALEHDKAYDQQLKAGDN	PYLRYNHADA	AEFQERL	QEDTSFG	GNLGRA	VFQAK	KRVLE	PLG-LVEE	EGAKTA
rh. 52-E	71	AALEHDKAYDQQLKAGDN	PYLRYNHADA	AEFQERL	QEDTSFG	GNLGRA	VFQAK	KRVLE	PLG-LVEE	EGAKTA
rh. 51-E	71	AALEHDKAYDQQLKAGDN	PYLRYNHADA	AEFQERL	QEDTSFG	GNLGRA	VFQAK	KRVLE	PLG-LVEE	EGAKTA
hu. 39-E	71	AALEHDKAYDQQLKAGDN	PYLRYNHADA	AEFQERL	QEDTSFG	GNLGRA	VFQAK	KRVLE	PLG-LVEE	EGAKTA
rh. 53-E	71	AALEHDKAYDQQLKAGDN	PYLRYNHADA	AEFQERL	QEDTSFG	GNLGRA	VFQAK	KRVLE	PLG-LVEE	EGAKTA
hu. 37-E	71	AALEHDKAYDQQLKAGDN	PYLRYNHADA	AEFQERL	QEDTSFG	GNLGRA	VFQAK	KRVLE	PLG-LVEE	AAKTA
rh. 43-E	71	AALEHDKAYDQQLKAGDN	PYLRYNHADA	AEFQERL	QEDTSFG	GNLGRA	VFQAK	KRVLE	PLG-LVEE	EGAKTA
rh. 50-E	71	AALEHDKAYDQQLKAGDN	PYLRYNHADA	AEFQERL	QEDTSFG	GNLGRA	VFQAK	KRVLE	PLG-LVEE	EGAKTA
rh. 49-E	71	AALEHDKAYDQQLKAGDN	PHLRYNHADA	AEFQERL	QEDTSFG	GNLGRA	VFQAK	KRVLE	PLG-LVEE	EGAKTA
rh. 61-E	71	AALEHDKAYDQQLKAGDN	PYLRYNHADA	AEFQERL	QEDTSFG	GNLGRA	VFQAK	KRVLE	PLG-LVEE	EGAKTA
hu. 41-E	71	AALEHDKAYDQQLKAGDN	PYLRYNHADA	AEFQERL	QEDTSFG	GNLGRA	VFQAK	KRVLE	PLG-PVEE	AAKTA

[illegible]

hu. 63-B 140 PGKKRPVEHSPA-EPDSSSGTGKAGQQPARKRLNFGQTGDADSVDP-PQPLGQPPAAPSGLGTNTMATGS  
hu. 56-B 140 PGKKRPVEHSPV-EPDSSSGTGKAGNQPARKRLNFGQTGDADSVDP-PQPLGQPPAAPSGLGTNTMATGS  
hu. 45-B 140 PGKKRPVEHSPV-EPDSSSGTGKAGQQPARKRLNFGQTGDADSVDP-PQPLGQPPAAPSGLGTNTMATGS  
hu. 57-B 139 PGKKRPVEHSPV-EPDSSSGTGKAGNQPARKRLNFGQTGDADSVDP-PQPLGQPPAAPSGLGTNTMATGS  
hu. 35-B 140 PGKKRPVEHSPV-EPDSSSGTGKAGQQPARKRLNFGQTGDADSVDP-PQPLGQPPAAPSGLGTNTMATGS  
hu. 58-B 140 PGKKRPVEHSPV-EPDSSSGTGKAGNQPARKRLNFGQTGDADSVDP-PQPLGQPPAAPSGLGTNTMATGS  
hu. 28-B 140 PGKKRPVEHSPA-EPDSSSGTGKSGNQPARKRLNFGQTGDSDSVDP-PQPLGQPPAAPSGLGTNTMATGS  
hu. 51-B 140 PGKKRPVEHSPV-EPDSSSGTGKAGQQPARKRLNFGQTGDADSVDP-PQPLGQPPAAPSGLGTNTMATGS  
hu. 19-B 140 PGEKRPVEHSPA-EPDSSSGTGKAGQQPARKRLNFGQTGDADSVDP-PQPLGQPPAAPSGLGTNTMASGS  
hu. 49-B 140 PGKKRPVEHSPV-EPDSSSGTGKAGQQPARKRLNFGQTGDADSVDP-PQPLGQPPAAPSGLGTNTMATGS  
hu. 52-B 140 PGKKRPVEHSPV-EPDSSSGTGKAGQQPARKRLNFGQTGDADSVDP-PQPLGQPPAAPSGLGTNTMATGS  
hu. 13-B 140 PGKKRPVEHSPA-EPDSSSGTGKAGQQPARKRLNFGQTGDADSVDP-PQPLGQPPAAPSGLGTNTMATGS  
AAV2-B 140 PGKKRPVEHSPV-EPDSSSGTGKAGQQPARKRLNFGQTGDADSVDP-PQPLGQPPAAPSGLGTNTMATGS  
hu. 20-B 140 PGEKRPVEHSPA-EPDSSSGTGKAGQQPARKRLNFGQTGDADSVDP-PQPLGQPPAAPSGLGTNTMASGS  
hu. 24-B 140 PGKKRPVEHSPA-EPDSSSGTGKAGQQPARKRLNFGQTGDADSVDP-PRPLGQPPAAPSGLGTNTMASGS  
hu. 64-B 140 PGKKRPVEHSLA-EPDSSSGTGKAGQQPARRRLNFGQTGDADSVDP-PQPLGQPPAAPSGLGTNTMATGS  
hu. 27-B 140 PGKKRPVEHSPA-EPDSSSGTGKAGQQPARKRLNFGQTGDADSVDP-PQPLGQPPAAPSGLGTNTMASGS  
hu. 21-B 140 PGKKRPVEHSPA-EPDSSSGTGKAGQQPARKRLNFGQTGDADSVDP-PRPLGQPPAAPSGLGTNTMASGS  
hu. 22-B 140 PGKKRPVEHSPA-EPDSSSGTGKAGQQPARKRLNFGQTGDADSVDP-PQPLGQPPAAPSGLGTNTMASGS  
hu. 23-B 140 PGKKRPVEHSPA-EPDSSSGTGKAGQQPARKRLNFGQTGDADSVDP-PQPLGQPPAAPSGLGTNTMASGS  
hu. 7-C 140 PGKKRPVEHSPA-EPDSSSGTGKAGQQPARKRLNFGQTGDADSVDP-PQPLGQPPAAPSGLGTNTMATGS  
hu. 61-C 140 PGKKRPVEHPPV-EPDSSSGTGKAGQQPARKRLNFGQTGDADSVDP-PQPLGQPPAAPSGLGTNTMATGS  
rh. 56-C 140 PGKKRPVEHSPA-EPDSSSGTGKAGQQPARKRLNFGQTGDADSVDP-PQPLGQPPAAPSGLGTNTMATGS  
hu. 9-C 140 PGKKRPVEHSPV-EPDSSSGTGKAGHQPARKRLNFGQTGDADSVDP-PQPLGQPPAAAPTSLGSTTMTATGS  
hu. 54-C 140 PGKKRPVEHSPA-EPDSSSGTGKAGQQPARKRLNFGQTGDADSVDP-PQPLGQPPAAAPTSLGSTTMTATGS  
hu. 53-C 140 PGKKRPVEHSPA-EPDSSSGTGKAGQQPARKRLNFGQTGDADSVDP-PQPLRQPPAAAPTSLGSTTMTATGS  
hu. 60-C 140 PGKKRPVEHSPV-EPDSSSGTGKAGQQPARKRLNFGQTGDADSVDP-PQPLGQPPAAPSGLGTNTMATGS  
hu. 55-C 140 PGKKRPVEHSPA-EPDSSSGTGKAGQQPARKRLNFGQTGDADSVDP-PQPLGQPPAAAPTSLGSTTMTATGS  
hu. 2-C 140 PGKKRPVEHSPV-EPDSSSGTGKAGQRPARKRLNFGQTGDADSVDP-PQPLGQPPAAPSGLGTNTMATGS  
hu. 1-C 140 PGKKRPVEHSPV-EPDSSSGTGKAGQQPARKRLNFGQTGDADSVDP-PQPLGQPPAAPSGLGTNTMATGS

hu.18-C 140 PGKKRPVEHSPV-EPDSSSGTGKAGQQPARKRLNFGQTGDADSVDP-PQPLGQPPAAPSGLGSTTMASGS  
 hu.3-C 141 PGKKRPVEHSPV-EPDSSSGTGKAGQQPARKRLNFGQTGDADSVDP-PQPLGQPPAAPSGLGSTTMATGS  
 hu.25-C 140 PGKKRPVEHSPA-EPDSSSGTGKAGQQPARKRLNFGQTGDADSVDP-PQPLGQPPAAPSGLGSTTMATGS  
 hu.15-C 140 PGKKRPVEHSPV-EPDSSSGTGKAGNQPARKRLNFGQTGDADSVDP-PQPLGQPPAAPSGLGSTTMATGS  
 hu.16-C 140 PGKKRPVEHSPV-EPDSSSGTGKAGNQPARKRLNFGQTGDADSVDP-PQPLGQPPAAPSGLGSTTMATGS  
 hu.11-C 140 PGKKRPVEHSPV-EPDSSSGTGKAGHQPARKRLNFGQTGDADSVDP-PQPLGQPPAAPSLGSTTMATGS  
 hu.10-C 140 PGKKRPVEHSPV-EPDSSSGTGKAGHQPARKRLNFGQTGDADSVDP-PQPLGQPPAAPSLGSTTMATGS  
 hu.4-C 140 PGKKRPVEHSPV-EPDSSSGTGKAGQQPARKRLNFGQTGDADSVDP-PQPLGQPPAAPSLGSTTMATGS  
 rh.54-D 140 PGKKRPVEPSQRSDDSTGIGKKGQQPARKRLNFGQTGDSESVDP-PQPLGQPPAAPSGLGSTMAAGG  
 rh.48-D 140 PGKKRPVEPSQRSDDSTGIGKKGQQPARKRLNFGQTGDSESVDP-PQPLGQPPAAPSGLGSTMAAGG  
 rh.55-D 140 PGKKRPVEPSQRSDDSTGIGKKGQQPARKRLNFGQTGDSESVDP-PQPLGQPPAAPSGLGSTMAAGG  
 rh.62-D 140 PGKKRPVEPSQRSDDSTGIGKKGQQPARKRLNFGQTGDSESVDP-PQPLGQPPAAPSGLGSTMAAGG  
 AAV7-D 140 PAKKRPVEPSQRSDDSTGIGKKGQQPARKRLNFGQTGDSESVDP-PQPLGQPPAAPSGLGSTMAAGG  
 rh.52-E 140 PGKKRPVEPSQRSDDSTGIGKKGQQPARKRLNFGQTGDSESVDP-PQPLGQPPAAPSGLGSTMAAGG  
 rh.51-E 140 PGKKRPVEPSQRSDDSTGIGKKGQQPARKRLNFGQTGDSESVDP-PQPLGQPPAAPSGLGSTMAAGG  
 hu.39-E 140 PGKKRPVEPSQRSDDSTGIGKKGQQPARKRLNFGQTGDSESVDP-PQPLGQPPAAPSGLGSTMAAGG  
 rh.53-E 140 PGKKRPVEPSQRSDDSTGIGKKGQQPARKRLNFGQTGDSESVDP-PQPLGQPPAAPSGLGSTMAAGG  
 hu.37-E 140 PGKKRPVEPSQRSDDSTGIGKKGQQPARKRLNFGQTGDSESVDP-PQPLGQPPAAPSGLGSTMAAGG  
 rh.43-E 140 PGKKRPVEQSPQ-EPDSSSGTGKAGQQPARKRLNFGQTGDSESVDP-PQPLGQPPAAPSGVGPNTMAAGG  
 rh.50-E 140 PGKKRPVEPSQRSDDSTGIGKKGQQPARKRLNFGQTGDSESVDP-PQPLGQPPAAPSGVGPNTMAAGG  
 rh.49-E 140 PGKKRPVEPSQRSDDSTGIGKKGQQPARKRLNFGQTGDSESVDP-PQPLGQPPAAPSGVGPNTMAAGG  
 rh.61-E 140 PGKKRPVEPSQRSDDSTGIGKKGQQPARKRLNFGQTGDSESVDP-PQPLGQPPAAPSGVGPNTMAAGG  
 hu.41-E 140 PGKKRPVEPPQRSDDSTGIGKKGQQPARKRLNFGQTGDSESVDP-PQPLGQPPAAPSGVGPNTMAAGG  
 rh.64-E 140 PGKKRPVEPSQRSDDSTGIGKKGQQPARKRLNFGQTGDSESVDP-PQPLGQPPAAPSGVGPNTMAAGG  
 hu.42-E 140 PGKKRPVEPSQRSDDSTGIGKKGQQPARKRLNFGQTGDSESVDP-PQPLGQPPAAPSGVGPNTMAAGG  
 rh.57-E 140 PGKKRPVEPSQRSDDSTGIGKKGQQPARKRLNFGQTGDSESVDP-PQPLGQPPAAPSGVGPNTMAAGG  
 hu.40-E 140 PGKKRPVEPSQRSDDSTGIGKKGQQPARKRLNFGQTGDSESVDP-PQPLGQPPAAPSGVGPNTMAAGG  
 AAV8-E 140 PGKKRPVEPSQRSDDSTGIGKKGQQPARKRLNFGQTGDSESVDP-PQPLGQPPAAPSGVGPNTMAAGG  
 rh.58-E 140 PGKKRPVEPSQRSDDSTGIGKKGQQPARKRLNFGQTGDSESVDP-PQPLGQPPAAPSGVGPNTMAAGG  
 rh.40-E 140 PGKKRPVEPSQRSDDSTGIGKKGQQPARKRLNFGQTGDSESVDP-PQPLGQPPAAPSGVGPNTMAAGG

FIG. 2H

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hu.67-E 140 PGKKRPVEPSQSPDSSTIGKKGQQPAKKRLNFGQTGDSSEVPD-PQIGEPAPGPSGLSGTMAAGG  
 hu.17-E 140 PGKKRPVEPSQSPDSSTIGKTGQQPAKKRLNFGQTGDSSEVPD-PQIGEPAPGPSGLSGTMAAGG  
 hu.6-E 140 PGKKRPVEPSQSPDSSTIGKTGQQPAKKRLNFGQTGDSSEVPD-PQIGEPAPGPSGLSGTMAAGG  
 hu.66-E 140 PGKKRPVEPSQSPDSSTIGKTGQQPAKKRLNFGQTGDSSEVPD-PQIGEPAPGPSGLSGTMAAGG  
 rh.38-E 140 PGKKRPVEPSQSPDSSTIGKTGQQPAKKRLNFGQTGDSSEVPD-PQIGEPAPGPSGLSGTMAAGG  
 hu.32-F 140 PGKKRPVEQSPQ-EPDSSAGIGKSGQPAKKKLNFGQTGDTESVPD-PQIGEPAPGPSGLSGTMAAGG  
 AAV9/hu 140 PGKKRPVEQSPQ-EPDSSAGIGKSGAQPAAKKRLNFGQTGDTESVPD-PQIGEPAPGPSGLSGTMAAGG  
 hu.31-F 140 PGKKRPVEQSPQ-EPDSSAGIGKSGQPAKKKLNFGQTGDTESVPD-PQIGEPAPGPSGLSGTMAAGG

220 230 240 250 260 270 280  
 ....|....|....|....|....|....|....|....|....|....|....|  
 AAV5 198 GGPLGDNNGADGVGNASGDWHCDSTWMDRVVTKSTRTWLPSYNNHQYREIKS-GSVDGSNANAYFGY  
 AAV3-3 208 GAPMADNNEGADGVGNSSGNWHCDSTWLGDRVITSTRTWALPTYNNHLYKQIS--SQSGASNDNHYFGY  
 AAV4-4 202 GGAAVEGQGADGVGNASGDWHCDSTWSEGHVTTTSTRTWLPTYNNHLYKRLG---ESLQNTYNGF  
 AAV1-A 208 GAPMADNNEGADGVGNASGNWHCDSTWLGDRVITSTRTWALPTYNNHLYKQISS-ASTGASNDNHYFGY  
 hu.46-A 208 GAPMADNNEGADGVGNASGNWHCDSTWLGDRVITSTRTWALPTYNNHLYKQISS-ASTGASNDNHYFGY  
 hu.48-A 208 GAPMADNNEGADGVGNASGNWHCDSTWLGDRVITSTRTWALPTYNNHLYKQISS-TSTGASNDNHYFGY  
 hu.44-A 208 GAPMADNNEGADGVGNASGNWHCDSTWLGDRVITSTRTWALPTYNNHLYKQISS-ASTGASNDNHYFGY  
 hu.43-A 209 GAPMADNNEGADGVGNASGNWHCDSTWLGDRVITSTRTWALPTYNNHLYKQISS-ASTGASNDNHYFGY  
 AAV6-A 208 GAPMADNNEGADGVGNASGNWHCDSTWLGDRVITSTRTWALPTYNNHLYKQISS-ASTGASNDNHYFGY  
 hu.34-B 208 GAPMADNNEGADGVGNSSGNWHCDSTWMDRVITSTRTWALPTYNNHLYKQIS--SQSGASNDNHYFGY  
 hu.47-B 208 GAPMADNNEGADGVGNSSGNWHCDSTWMDRVITSTRTWALPTYNNHLYKQIS--SQSGASNDSHYFGY  
 hu.29-B 208 GAPMADNNEGADGVGNSSGNWHCDSTWMDRVITSTRTWALPTYNNHLYKQIS--SQSGASNDNHYFGY  
 hu.63-B 208 GAPMADNNEGADGVGNSSGNWHCDSTWMDRVITSTRTWALPTYNNHLYKQIS--SQSGASNDNHYFGY  
 hu.56-B 208 GAPMADNNEGADGVGNSSGNWHCDSTWMDRVITSTRTWALPTYNNHLYKQIS--SQSGASNDNHYFGY  
 hu.45-B 208 GAPMADNNEGADGVGNSSGNWHCDSTWMDRVITSTRTWALPTYNNHLYKQIS--SQSGASNDNHYFGY  
 hu.57-B 207 GAPMADNNEGADGVGNSSGDNWHCDSTWMDRVITSTRTWALPTYNNHLYKQIS--SQSGASNDNHYFGY  
 hu.35-B 208 GAPMADNNEGADGVGNSSGNWHCDSTWMDRVITSTRTWALPTYNNHLYKQIS--SQSGASNDNHYFGY  
 hu.58-B 208 GAPMADNNDGADGVGNSSGNWHCDSTWMDRVITSTRTWALPTYNNHLYKQIS--SQSGASNDNHYFGY  
 hu.28-B 208 GAPMADNNEGADGVGNSSGNWHCDSTWMDRVITSTRTWALPTYNNHLYKQIS--SQSGASNDNHYFGY

hu. 51-B 208 GAPMADNNEGADGVGNSSGNWHCHDSTWMGDRVITTTSTRTWALPTYNNHLYKQIS--SQSGASNDNHYFGY  
 hu. 19-B 208 GAPMADNNEGADGVGNSSGNWYCDSTWMGDRVITTTSTRTWALPTYNNHLYKQIS--SQSGASNDNHYFGY  
 hu. 49-B 208 GAPMADNNEGADGVGNSSGWSHCHDSTWMGDRVITTTSTRTWALPTYNNHLYKQIS--SQSGASNDNHYFGY  
 hu. 52-B 208 GAPMADNNEGADGVGNSSGNRCHDSTWMGDRVITTTSTRTWALPTYNNHLYKQIS--SQSGASNDNHYFGY  
 hu. 13-B 208 GAPMADNNEGADGVGNSSGNWHCHDSTWMGDRVITTTSTRTWALPTYNNHLYKQIS--SQSGASNDNHYFGY  
 AAV2-B 208 GAPMADNNEGADGVGNSSGNWHCHDSTWMGDRVITTTSTRTWALPTYNNHLYKQIS--SQSGASNDNHYFGY  
 hu. 20-B 208 GAPMADNNEGADGVGNSSGNWHCHDSTWMGDRVITTTSTRTWALPTYNNHLYKQIS--SQSGASNDNHYFGY  
 hu. 24-B 208 GAPMADNNEGADGVGNSSGNWHCHDSTWMGDRVITTTSTRTWALPTYNNHLYKQIS--SQSGASNDNHYFGY  
 hu. 64-B 208 GAPMADNNEGADGVGNSSGNWHCHDSTWMGDRVITTTSTRTWALPTYNNHLYKQIS--SQSGASNDNHYFGY  
 hu. 27-B 208 GAPMADNNEGADGVGNSSGNWHCHDSTWMGDRVITTTSTRTWALPTYNNHLYKQIS--SQSGASNDNHYFGY  
 hu. 21-B 208 GAPMADNNEGADGVGNSSGNWHCHDSTWMGDRVITTTSTRTWALPTYNNHLYKQIS--SQSGASNDNHYFGY  
 hu. 22-B 208 GAPMADNNEGADGVGNSSGNWHCHDSTWMGDRVITTTSTRTWALPTYNNHLYKQIS--SQSGASNDNHYFGY  
 hu. 23-B 208 GAPMADNNEGADGVGNSSGNWHCHDSTWMGDRVITTTSTRTWALPTYNNHLYKQIS--SQSGASNDNHYFGY  
 hu. 7-C 208 GAPMADNNEGADGVGNSSGNWHCHDSTWMGDRVITTTSTRTWALPTYNNHLYKQIS--SQSGASNDNHYFGY  
 hu. 61-C 208 GAPMADNNEGADGVGNSSGNWHCHDSTWMGDRVITTTSTRTWALPTYNNHLYKQIS--SQSGASNDNHYFGY  
 rh. 56-C 208 GAPMADNNEGADGVGNSSGNWHCHDSTWMGDRVITTTSTRTWALPTYNNHLYKQIS--SQSGASNDNHYFGY  
 hu. 9-C 208 GAPMADNNEGADGVGNSSGNWHCHDSTWMGDRVITTTSTRTWALPTYNNHLYKQIS--SQSGASNDNHYFGY  
 hu. 54-C 208 GAPMADNNEGADGVGNSSGNWHCHDSTWMGDRVITTTSTRTWALPTYNNHLYKQIS--SQSGASNDNHYFGY  
 hu. 53-C 208 GAPMADNNEGADGVGNSSGNWHCHDSTWMGDRVITTTSTRTWALPTYNNHLYKQIS--SQSGASNDNHYFGY  
 hu. 60-C 208 GAPMADNNEGADGVGNSSGNWHCHDSTWMGDRVITTTSTRTWALPTYNNHLYKQIS--SQSGASNDNHYFGY  
 hu. 55-C 208 GAPMADNNEGADGVGNSSGNWHCHDSTWMGDRVITTTSTRTWALPTYNNHLYKQIS--SQSGASNDNHYFGY  
 hu. 2-C 208 GAPMADNNEGADGVGNSSGNWHCHDSTWMGDRVITTTSTRTWALPTYNNHLYKQIS--SQSGASNDNHYFGY  
 hu. 1-C 208 GAPMADNNEGADGVGNSSGNWHCHDSTWMGDRVITTTSTRTWALPTYNNHLYKQIS--SQSGASNDNHYFGY  
 hu. 18-C 208 GAPVADNNEGADGVGNSSGNWHCHDSTWMGDRVITTTSTRTWALPTYNNHLYKQIS--SQSGACNDNHYFGY  
 hu. 3-C 209 GAPMADNNEGADGVGNSSGNWHCHDSTWMGDRVITTTSTRTWALPTYNNHLYKQIS--SQSGASNDNHYFGY  
 hu. 25-C 208 GAPMADNNEGADGVGNSSGNWHCHDSTWMGDRVITTTSTRTWALPTYNNHLYKQIS--SQSGASNDNHYFGY  
 hu. 15-C 208 GAPVADNNEGADGVGNSSGNWHCHDSTWMGDRVITTTSTRTWALPTYNNHLYKQIS--SQSGASNDNHYFGY  
 hu. 16-C 208 GAPVADNNEGADGVGNSSGNWHCHDSTWMGDRVITTTSTRTWALPTYNNHLYKQIS--SQSGASNDNHYFGY  
 hu. 11-C 208 GAPMADNNEGADGVGNSSGNWHCHDSTWMGDRVITTTSTRTWALPTYNNHLYKQIS--SQSGASNDNHYFGY  
 hu. 10-C 208 GAPMADNNEGADGVGNSSGNWHCHDSTWMGDRVITTTSTRTWALPTYNNHLYKQIS--SQSGASNDNHYFGY



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hu.4-C	208	GAPMADNNEGADGVGNSSGNWHCD	QWLGLDRVITTTSTRTWALPT	YNNHLYKQISS--SQSGASNDNHYFGY
rh.54-D	209	GAPMADNNEGADGVGNASGNWHCD	STWLGLDRVITTTSTRTWALPT	YNNHLYKQISS-QSAGSTNDNVYFGY
rh.48-D	209	GAPMADNNEGADGVGNASGNWHCD	STWLGLDRVITTTSTRTWALPT	YNNHLYKQISS-QSAGSTNDNVYFGY
rh.55-D	209	GAPMADNNEGADGVGNSSGNWHCD	STRLGLDRVITTTSTRTWALPT	YNNHLYKQISS-QSAGSTNDNVYFGY
rh.62-D	209	GAPMADNNEGADGVGNASGNWHCD	STWLGLDRVITTTSTRTWALPT	YNNHLYKQISS-QSAGSTNDNVYFGY
AAV7-D	209	GAPMADNNEGADGVGNASGNWHCD	STWLGLDRVITTTSTRTWALPT	YNNHLYKQISS-ETAGSTNDNTYFGY
rh.52-E	209	GAPMADNNEGADGVGNSSGNWHCD	STWLGLDRVITTTSTRTWALPT	YNNHLYKQISSNGTSGGSTNDNTYFGY
rh.51-E	209	GAPMADNNEGADGVGNSSGNWHCD	STWLGLDRVITTTSTRTWALPT	YNNHLYKQISSNGTSGGSTNDNTYFGY
hu.39-E	209	GAPMADNNEGADGVGNSSGNWHCD	STWLGLDRVITTTSTRTWALPT	YNNHLYKQISSNGTSGGSTNDNTYFGY
rh.53-E	209	GAPMADNNEGADGVGNSSGNWHCD	STWLGLDRVITTTSTRTWALPT	YNNHLYKQISSNGTSGGSTNDNTYFGY
hu.37-E	209	GAPMADNNEGADGVGNSSGNWHCD	STWLGLDRVITTTSTRTWALPT	YNNHLYKQISSNGTSGGSTNDNTYFGY
rh.43-E	208	GAPMADNNEGADGVGNSSGNWHCD	STWLGLDRVITTTSTRTWALPT	YNNHLYKQISSNGTSGGATNDNTYFGY
rh.50-E	209	GAPMADNNEGADGVGNSSGNWHCD	STWLGLDRVITTTSTRTWALPT	YNNHLYKQISSNGTSGGSTNDNTYFGY
rh.49-E	209	GAPMADNNEGADGVGNSSGNWHCD	STWLGLDRVITTTSTRTWALPT	YNNHLYKQISSNGTSGGSTNDNTYFGY
rh.61-E	209	GAPMADNNEGADGVGNSSGNWHCD	STWLGLDRVITTTSTRTWALPT	YNNHLYKQISSNGTSGGSTNDNTYFGY
hu.41-E	209	GAPMADNNEGADGVGNSSGNWHCD	STWLGLDRVITTTSTRTWALPT	YNNHLYKQISSNGTSGGSTNDNTYFGY
rh.64-E	209	GAPMADNNEGADGVGNSSGNWHCD	STWLGLDRVITTTSTRTWALPT	YNNHLYKQISSNGTSGGSTNDNTYFGY
hu.42-E	209	GAPMADNNEGADGVGNSSGNWHCD	STWLGLDRVITTTSTRTWALPT	YNNHLYKQISSNGTSGGSTNDNTYFGY
rh.57-E	209	GAPMADNNEGADGVGNSSGNWHCD	STWLGLDRVITTTSTRTWALPT	YNNHLYKQISSNGTSGGSTNDNTYFGY
hu.40-E	209	GAPMADNNEGADGVGNSSGNWHCD	STWLGLDRVITTTSTRTWALPT	YNNHLYKQISSNGTSGGSTNDNTYFGY
AAV8-E	209	GAPMADNNEGADGVGNSSGNWHCD	STWLGLDRVITTTSTRTWALPT	YNNHLYKQISSNGTSGGATNDNTYFGY
rh.58-E	209	GAPMADNNEGADGVGNSSGNWHCD	STWLGLDRVITTTSTRTWALPT	YNNHLYKQISSNGTSGGSTNDNTYFGY
rh.40-E	209	GAPMADNNEGADGVGNSSGNWHCD	STWLGLDRVITTTSTRTWALPT	YNNHLYKQISSNGTSGGSTNDNTYFGY
hu.67-E	209	GAPMADNNEGADGVGNSSGNWHCD	STWLGLDRVITTTSTRTWALPT	YNNHLYKQISSNGTSGGSTNDNTYFGY
hu.17-E	209	GAPMADNNEGADGVGNSSGNWHCD	STWLGLDRVITTTSTRTWALPT	YNNHLYKQISSNGTSGGSTNDNTYFGY
hu.6-E	209	GAPMADNNEGADGVGNSSGNWHCD	SAWLGLDRVITTTSTRPWALPT	YNNHLYKQISSNGTSGGSTNDNTYFGY
hu.66-E	209	GAPMADNNEGADGVGNSSGNWHCD	STWLGLDRVITTTSTRTWALPT	YNNHLYKQISSNGTSGGSTNDNTYFGY
rh.38-E	209	GAPMADNNEGADGVGNSSGNWHCD	STWLGLDRVITTTSTRTWALPT	YNNHLYKQISSNGTSGGSTNDNTYFGY
hu.32-F	208	GAPVADNNEGADGVGNSSGNWHCD	SQLGLDRVITTTSTRTWALPT	YNNHLYKQISSNSTSGGSSNDNAYFGY
AAV9/hu	208	GAPVADNNEGADGVGNSSGNWHCD	SQLGLDRVITTTSTRTWALPT	YNNHLYKQISSNSTSGGSSNDNAYFGY

FIG. 2K



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hu.31-F 208 GAPVADNEGADGVGSSGNWGHCDQWLGDVRVITSTRTWALPTYNNHLYKQISNSTSGGSSNDNAYFGY  
 .....|.....|.....|.....|.....|.....|.....|.....|.....|.....|.....|.....|.....|.....|.....|.....|  
 AAV5 267 STPWGYFDENRFSHSPRDWQRLINNYWGFPRSLRVKIFNIQVKEVTQDSTTTIANNLTSTVQVFTD  
 AAV3-3 276 STPWGYFDENRFHCHFSRPDWQRLINNNWGFPRPKLSEKLFNIQVRGVTQNDGTTIANNLTSTVQVFTD  
 AAV4-4 267 STPWGYFDENRFHCHFSRPDWQRLINNNWGMRPKAMRVKIFNIQVKEVTSNGETTVANNLTSTVQIFAD  
 AAV1-A 277 STPWGYFDENRFHCHFSRPDWQRLINNNWGFPRKRLNFKLFNIQVKEVTNDGVTTIANNLTSTVQVFS  
 hu.46-A 277 STPWGYFDENRFHCHFSRPDWQRLINNNWGFPRKRLNFKLFNIQVKEVTNDGVTTIANNLTSTVQVFS  
 hu.48-A 277 GTPWGYFDENRFHCHFSRPDWQRLINNNWGFPRKRLNFKLFNIQVEEVTNDGVTTIANNLTSTVQVFS  
 hu.44-A 277 STPWGYFDENRFHCHFSRPDWQRLINNNWGFPRKRLNFKLFNIQVKEVTNDGVTTIANNLTSTVQVFS  
 hu.43-A 278 STPWGYFDENRFHCHFSRPDWQRLINNNWGFPRKRLNFKLFNIQVKEVTNDGVTTIANNLTSTVQVFS  
 AAV6-A 277 STPWGYFDENRFHCHFSRPDWQRLINNNWGFPRKRLNFKLFNIQVKEVTNDGVTTIANNLTSTVQVFS  
 hu.34-B 276 STPWGYFDENRFHCHFSRPDWQRLINNNWGFPRKRLNFKLFNIQVKEVTQNDGTTIANNLTSTVQVFTD  
 hu.47-B 276 STPWGYFDENRFHCHFSRPDWQRLINNNWGFPRKRLNFKLFNIQVKEVTQNDGTTIANNLTSTVQVFTD  
 hu.29-B 276 STPWGYFDENRFHCHFSRPDWQRLINNNWGFPRKRLNFKLFNIQVKEVTQNDGTTIANNLTSTVQVFTD  
 hu.63-B 276 STPWGYFDENRFHCHFSRPDWQRLINNNWGFPRKRLNFKLFNIQVKEVTQNDGTTIANNLTSTVQVFTD  
 hu.56-B 276 STPWGYFDENRFHCHFSRPDWQRLINNNWGFPRKRLNFKLFNIQVKEVTQNDGTTIANNLTSTVQVFTD  
 hu.45-B 276 STPWGYFDENRFHCHFSRPDWQRLINNNWGFPRKRLNFKLFNIQVKEVTQNDGTTIANNLTSTVQVFTD  
 hu.57-B 275 STPWGYFDENRFHCHFSRPDWQRLINNNWGFPRKRLNFKLFNIQVKEVTQNDGTTIANNLTSTVQVFTD  
 hu.35-B 276 STPWGYFDENRFHCHFSRPDWQRLINNNWGFPRKRLNFKLFNIQVKEVTQNDGTTIANNLTSTVQVFTD  
 hu.58-B 276 STPWGYFDENRFHCHFSRPDWQRLINNNWGFPRKRLNFKLFNIQVREVTQNDGTTIANNLTSTVQVFTD  
 hu.28-B 276 STPWGYFDENRFHCHFSRPDWQRLINNNWGFPRKRLNFKLFNIQVKEVTQNDGTTIANNLTSTVQVFTD  
 hu.51-B 276 STPWGYFDENRFHCHFSRPDWQRLINNNWGFPRKRLNFKLFNIQVKEVTQNDGTTIANNLTSTVQVFTD  
 hu.19-B 276 STPWGYFDENRFHCHFSRPDWQRLINNNWGFPRKRLSEKLFNIQVKEVTQNDGTTIANNLTSTVQVFTD  
 hu.49-B 276 STPWGYFDENRFHCHFSRPDWQRLINNNWGFPRKRLNFKLFNIQVKEVTQNDGTTIANNLTSTVQVFTD  
 hu.52-B 276 STPWGYFDENRFHCHFSRPDWQRLINNNWGFPRKRLNFKLFNIQVKEVTQNDGTTIANNLTSTVQVFTD  
 hu.13-B 276 STPWGYFDENRFHCHFSRPDWQRLINNNWGFPRKRLNFKLFNIQVKEVTQNDGTTIANNLTSTVQVFTD  
 AAV2-B 276 STPWGYFDENRFHCHFSRPDWQRLINNNWGFPRKRLNFKLFNIQVKEVTQNDGTTIANNLTSTVQVFTD  
 hu.20-B 276 STPWGHFDENRFHCHFSRPDWQRLINNNWGFPRKRLSEKLFNIQVKEVTQNDGTTIANNLTSTVQVFTD

hu.24-B 276 STPWGYFDENRFHCHFSRDPWQRLINNNWGFPRKRLSEKLFNIQVKEVTQNDGTTIANNLTSTVQVFTD  
 hu.64-B 276 STPWGYFDENRFHCHFSRDPWQRLINNNWGSRPKRLNFKLFNIQVKEVTQNDGTTIANNLTSTVQVFTD  
 hu.27-B 276 STPWGYFDENRFHCHFSRDPWQRLINNNWGFPRKRLSEKLFNIQVKEVTQNDGTTIANNLTSTVQVFTD  
 hu.21-B 276 STPWGYFDENRFHCHFSRDPWQRLINNNWGFPRKRLSEKLFNIQVKEVTQNDGTTIANNLTSTVQVFTD  
 hu.22-B 276 STPWGYFDENRFHCHFSRDPWQRLINNNWGFPRKRLSEKLFNIQVKEVTQNDGTTIANNLTSTVQVFTD  
 hu.23-B 276 STPWGYFDENRFHCHFSRDPWQRLINNNWGFPRKRLSEKLFNIQVKEVTQNDGTTIANNLTSTVQVFTD  
 hu.7-C 276 STPWGYFDENRFHCHFSRDPWQRLINNNWGFPRKRLNFKLFNIQVKEVTQNDGTTIANNLTSTVQVFTD  
 hu.61-C 276 STPWGYFDENRFHCHFSRDPWQRLINNNWGFPRKRLNFKLFNIQVKEVTQNDGTTIANNLTSTVQVFTD  
 rh.56-C 276 STPWGYFDENRFHCHFSRDPWQRLINNNWGFPRKRLNFKLFNIQVKEVTQNDGTTIANNLTSTVQVFTD  
 hu.9-C 276 STPWGYFDENRFHCHFSRDPWQRLINNNWGFPRKRLNFKLFNIQVKEVTQNDGTTIANNLTSTVQVFTD  
 hu.54-C 276 STPWGYFDENRFHCHFSRDPWQRLINNNWGFPRKRLNFKLFNIQVKEVTQNDGTTIANNLTSTVQVFTD  
 hu.53-C 276 STPWGYFDENRFHCHFSRDPWQRLINNNWGFPRKRLNFKLFNIQVKEVTQNDGTTIANNLTSTVQVFTD  
 hu.60-C 276 STPWGYFDENRFHCHFSRDPWQRLINNNWGFPRKRLNFKLFNIQVKEVTQNDGTTIANNLTSTVQVFTD  
 hu.55-C 276 STPWGYFDENRFHCHFSRDPWQRLINNNWGFPRKRLNFKLFNIQVKEVTQNDGTTIANNLTSTVQVFTD  
 hu.2-C 276 STPWGYFDENRFHCHFSRDPWQRLINNNWGFPRKRLNFKLFNIQVKEVTQNDGTTIANNLTSTVQVFTD  
 hu.1-C 276 STPWGYFDENRFHCHFSRDPWQRLINNNWGFPRKRLNFKLFNIQVKEVTQNDGTTIANNLTSTVQVFTD  
 hu.18-C 276 STPWGYFDENRFHCHFSRDPWQRLINNNWGFPRKRLNFKLFNIQVKEVTQNDGTTIANNLTSTVQVFTD  
 hu.3-C 277 STPWGYFDENRFHCHFSRDPWQRLINNNWGFPRKRLNFKLFNIQVKEVTQNDGTTIANNLTSTVQVFTD  
 hu.25-C 276 STPWGYFDENRFHCHFSRDPWQRLINNNWGFPRKRLNFKLFNIQVKEVTQNDGTTIANNLTSTVQVFTD  
 hu.15-C 276 STPWGYFDENRFHCHFSRDPWQRLINNNWGFPRKRLNFKLFNIQVKEVTQNDGTTIANNLTSTVQVFTD  
 hu.16-C 276 STPWGYFDENRFHCHFSRDPWQRLINNNWGFPRKRLNFKLFNIQVKEVTQNDGTTIANNLTSTVQVFTD  
 hu.11-C 276 STPWGYFDENRFHCHFSRDPWQRLINNNWGFPRKRLNFKLFNIQVKEVTQNDGTTIANNLTSTVQVFTD  
 hu.10-C 276 STPWGYFDENRFHCHFSRDPWQRLINNNWGFPRKRLNFKLFNIQVKEVTQNDGTTIANNLTSTVQVFTD  
 hu.4-C 276 STPWGYFDENRFHCHFSRDPWQRLVNNNGRPRKRLNFKLFNIQVKEVTQNDGTTIANNLTSTVQVFTD  
 rh.54-D 278 STPWGYFDENRFHCHFSRDPWQRLINNNWGFPRKRLNFKLFNIQVKEVTNDGVTIANNLTSTVQVFS  
 rh.48-D 278 STPWGYFDENRFHCHFSRDPWQRLINNNWGFPRKRLNFKLFNIQVKEVTNDGVTIANNLTSTVQVFS  
 rh.55-D 278 STPWGYFDENRFHCHFSRDPWQRLINNNWGFPRKRLNFKLFNIQVKEVTNDGVTIANNLTSTVQVFS  
 rh.62-D 278 STPWGYFDENRFHCHFSRDPWQRLINNNWGFPRKRLNFKLFNIQVKEVTNDGVTIANNLTSTVQVFS  
 AAV7-D 278 STPWGYFDENRFHCHFSRDPWQRLINNNWGFPRKRLNFKLFNIQVKEVTNDGVTIANNLTSTIQVFS  
 rh.52-E 279 STPWGYFDENRFHCHFSRDPWQRLINNNWGFPRKRLNFKLFNIQVKEVTNEGKTIANSLTSTIQVFTD

[illegible]

FIG. 2N

AAV1-A 347 SEYQLPYVLGSAHQGCLPPFPADVFMIPQYGYLTNNG---SQAVGRSSFYCYLEYFPPSQMLRTGNNFTFS  
 hu.46-A 347 SEYQLPYVLGSAHQGRLPPFPADVFMIPQYGYLTNNG---SQAVGRSSSYCYLEYFPPSQMLRTGNNFTFS  
 hu.48-A 347 SEYQLPYVLGSAHQGCLPPFPADVFMIPQYGYLTNNG---SQAVGRSSFYCYLEYFPPSQMLRTGNNFTFS  
 hu.44-A 347 SEYQLPYVLGSAHQGCLPPFPADVFMIPQYGYLTNNG---SQAVGRSSFYCYLEYFPPSQMLRTGNNFTFS  
 hu.43-A 348 SEYQLPYVLGSAHQGCLPPFPADVFMIPQYGYLTNNG---SQAVGRSSFYCYLEYFPPSQMLRTGNNFTFS  
 AAV6-A 347 SEYQLPYVLGSAHQGCLPPFPADVFMIPQYGYLTNNG---SQAVGRSSFYCYLEYFPPSQMLRTGNNFTFS  
 hu.34-B 346 SEYQLPYVLGSAHQGCLPPFPADVFMVPQYGYLTNNE---SQAVGRSSFYCYLEYFPPSQMLRTGNNFTFS  
 hu.47-B 346 SEYQLPYVLGSAHQGCLPPFPADVFMVPQYGYLTNNG---SQAVGRSSFYCYLEYFPPSQMLRTGNNFTFS  
 hu.29-B 346 SEYQLPYVLGSAHQGCLPPFPADVFMVPQYGYLTNNG---SQAVGRSSFYCYLEYFPPSQMLRTGNNFTFS  
 hu.63-B 346 SEYQLPYVLGSAHQGCLPPFPADVFMVPQYGYLTNNG---SQAVGRSSFYCYLEYFPPSQMLRTGNNFTFS  
 hu.56-B 346 LEYQLPYVLGSAHQGCLPPFPADVFMVPQYGYLTNNG---SQAVGRSSFYCYLEYFPPSQMLRTGNNFTFS  
 hu.45-B 346 SGYQLPYVLGSAHQGCLPPFPADVFMVPQYGYPTLNNG---SQAVGRSSFYCYLEYFPPSQMLRTGNNFTFS  
 hu.57-B 345 LEYQLPYVLGSAHQGCLPPFPADVFMVPQYGYLTNNG---SQAVGRSSFYCYLEYFPPSQMLRTGNNFTFS  
 hu.35-B 346 SEYQLPYVLGSAHQGCLPPFPADVFMVPQYGYLTNNG---SQAVGRSSFYCYLEYFPPSQMLRTGNNFTFS  
 hu.58-B 346 SEYQLPYVLGSAHQGCLPPFPADVFMVPQYGYLTNNG---SQAVGRSSFYCYLEYFPPSQMLRTGNNFTFS  
 hu.28-B 346 SEYQLPYVLGSAHQGCLPPFPADVFMVPQYGYLTNNG---SQAVGRSSFYCYLEYFPPSQMLRTGNNFTFS  
 hu.51-B 346 SEYQLPYVLGSAHQGCLPPFPADVFMVPQYGYLTNNG---SQAVGRSSFYCYLEYFPPSQMLRTGNNFTFS  
 hu.19-B 346 SEYQLPYVLGSAHQGCLPPFPADVFMVPQYGYLTNNG---SQAVGRSSFYCYLEYFPPSQMLRTGNNFTFS  
 hu.49-B 346 SEYQLPYVPGSAHQGCLPPFPADVFMVPQYGYLTNNG---SQAVGRSSFYCYLEYFPPSQMLRTGNNFTFS  
 hu.52-B 346 SEYQLPYVLGSAHQGCLPPFPADVFMVPQYGYLTNSG---SQAVGRSSFYCYPEYFPPSQMLRTGNNFTFS  
 hu.13-B 346 SEYQLPYVLGSAHQGCLPPFPADVFMVPQYGYLTNNG---SQAVGRSSFYCYLEYFPPSQMLRTGNNFTFS  
 AAV2-B 346 SEYQLPYVLGSAHQGCLPPFPADVFMVPQYGYLTNNG---SQAVGRSSFYCYLEYFPPSQMLRTGNNFTFS  
 hu.20-B 346 SEYQLPYVLGSAHQGCLPPFPADVFMVPQYGYLTNNG---SQAVGRSSFYCYLEYFPPSQMLRTGNNFTFS  
 hu.24-B 346 SEYQLPYVLGSAHQGCLPPFPADVFMVPQYGYLTNNG---SQAVGRSSFYCYLEYFPPSQMLRTGNNFTFS  
 hu.64-B 346 SEYQLPYVLGSAHQGCLPPFPADVFMVPQYGYLTNNG---SQAVGRSSFYCYLEYFPPSQMLRTGNNFTFS  
 hu.27-B 346 SGYQLPYVLGSAHQGCLPPFPADVFMVPQYGYLTNNG---SQAVGRSSFYCYLEYFPPSQMLRTGNNFTFS  
 hu.21-B 346 SEYQLPYVLGSAHQGCLPPFPADVFMVPQYGYLTNNG---SQAVGRSSFYCYLEYFPPSQMLRTGNNFTFS  
 hu.22-B 346 SEYQLPYVLGSAHQGCLPPFPADVFMVPQYGYLTNNG---SQAVGRSSFYCYLEYFPPSQMLRTGNNFTFS  
 hu.23-B 346 SEYQLPYVLGSAHQGCLPPFPADVFMVPQYGYLTNNG---SQAVGRSSFYCYLEYFPPSQMLRTGNNFTFS  
 hu.7-C 346 SEYQLPYVLGSAHQGCLPPFPADVFMVPQYGYLTNNG---SQAVGRSSFYCYLEYFPPSQMLRTGNNFQFS

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hu.61-C 346 SEYQLPYVLGSAHQGCLPPFPADVFMVPQYGYLTNNG---SQAVGRSSFYCYEYFPSQMLRTGNNFQFS  
 rh.56-C 346 SEYQLPYVLGSAHQGCLPPFPADVFMVPQYGYLTNNG---SQAVGRSSFYCYEYFPSQMLRTGNNFQFS  
 hu.9-C 346 SEYQLPYVLGSAHQGCLPPFPADVFMVPQYGYLTNNG---SQAVGRSSFYCYEYFPSQMLRTGNNFTFS  
 hu.54-C 346 SEYQLPYVLGSAHQGCLPPFPADVFMVPQYGYLTNNG---SQAVGRSSFYCYEYFPSQMLRTGNNFQFS  
 hu.53-C 346 SEYQLPYVLGSAHQGCLPPFPADVFMVPQYGYLTNNG---SQAVGRSSFYCYEYFPSQMLRTGNNFQFS  
 hu.60-C 346 SEYQLPYVLGSAHQGCLPPFPADVFMVPQYGYLTNNG---SQAVGRSSFYCYEYFPSQMLRTGNNFQFS  
 hu.55-C 346 SEYQLPYVLGSAHQGCLPPFPADVFMVPQYGYLTNNG---SQAVGRSSFYCYEYFPSQMLRTGNNFQFS  
 hu.2-C 346 SEYQLPYVLGSAHQGCLPPFPADVFMVPQYGYLTNNG---SQAVGRSSFYCYEYFPSQMLRTGNNFQFS  
 hu.1-C 346 SEYQLPYVLGSAHQGCLPPFPADVFMVPQYGYLTNNG---SQAVGRSSFYCYEYFPSQMLRTGNNFQFS  
 hu.18-C 346 SEYQLPYVLGSAHQGCLPPFPADVFMVPQYGYLTNNG---SQAVGRSSFYCYEYFPSQMLRTGNNFQFS  
 hu.3-C 347 SEYQLPYVPGSAHQGCLPPFPADVFMVPQYGYLTNNG---SQAVGRSSFYCYEYFPSQMLRTGNNFQFS  
 hu.25-C 346 SEYQLPYVLGSAHQGCLPPFPADVFMVPQYGYLTNNG---SQAVGRSPFYCYEYFPSQMLRTGNNFQFS  
 hu.15-C 346 SGYQLPYVLGSAHQGCLPPFPADVFMVPQYGYLTNNG---SQAVGRSSFYCYEYFPSQMLRTGNNFQFS  
 hu.16-C 346 SEYQLPYVLGSAHQGCLPPFPADVFMVPQYGYLTNNG---SQAVGRSSFYCYEYFPSQMLRTGNNFQFS  
 hu.11-C 346 SEYQLPYVLGSAHQGCLPPFPADVFMVPQYGYLTNNG---SQAVGRSSFYCYEYFPSQMLRTGNNFTFS  
 hu.10-C 346 SEYQLPYVLGSAHQGCLPPFPADVFTVPQYGYLTNNG---SQAVGRSSFYCYEYFPSQMLRTGNNLTFS  
 hu.4-C 346 SEYQLPYVLGSAHQGCLPPFPADVFMVPQYGYLTNNG---SQAVGRSSFYCYEYFPSQMLRTGNNFQFS  
 rh.54-D 348 SEYQLPYVLGSAHQGCLPPFPADVFMIPQYGYLTNNG---SQSVGRSSFYCYEYFPSQVLRGTGNNFTFS  
 rh.48-D 348 SEYQLPYVLGSAHQGCLPPFPADVFMIPQYGYLTNNG---SQSVGRSSFYCYEYFPSQMLRTGNNFTFS  
 rh.55-D 348 SEYQLPYVLGSAHQGCLPPFPADVFMIPQYGYLTNNG---SQSVGRSSFYCYEYFPSQMLRTGNNFTFS  
 rh.62-D 348 SEYQLPYVLGSAHQGCLPPFPADVFMIPQYGYLTNND---SQSVGRSSFYCYEYFPSQMLRTGNNFTFS  
 AAV7-D 348 SEYQLPYVLGSAHQGCLPPFPADVFMIPQYGYLTNNG---SQSVGRSSFYCYEYFPSQMLRTGNNFEFS  
 rh.52-E 349 SEYQLPYVLGSAHQGCLPPFPADVFMIPQYGYLTPNNG---SQAVGRSSFYCYEYFPSQMLRTGNNFSFS  
 rh.51-E 349 SEYQLPYVLGSAHQGCLPPFPADVFMIPQYGYLTNNG---SQAVGRSSFYCYEYFPSQMLRTGNNFSFS  
 hu.39-E 349 SEYQPPYVLGSAHQGCLPPFPADVFMIPQYGYLTNNG---SQAVGRSSFYCYEYFPSQMLRTGNNFSFS  
 rh.53-E 349 SEYQLPYVLGSAHQGCLPPFPADVFMIPQYGYLTNNG---SQAVGRSSFYCYEYFPSQMLRTGNNFSFS  
 hu.37-E 349 SEYQLPYVLGSAHQGCLPPFPADVFMIPQYGYLTNNG---SQAVGRSSFYCYEYFPSQMLRTGNNFEFS  
 rh.43-E 348 SEYQLPYVLGSAHQGCLPPFPADVFMIPQYGYLTNNG---SQAVGRSSFYCYEYFPSQMLRTGNNFQFT  
 rh.50-E 349 SEYQLPYVLGSAHQGCLPPFPADVFMIPQYGYLTNNG---SQAVGRSSFYCYEYFPSQMLRTGNNFSFS  
 rh.49-E 349 SEYQLPYVLGSAHQGCLPPFPADVFMIPQYGNLTNNG---SQAVGRSSFYCYEYFPSQMLRTGNNFSFS

FIG. 2B

rh. 61-E	349	SEYQLPYVLGSAHQGCLPPFPADVFMIPOYGylTLNNG--SQAVGRSSFYCLEYFSPQMLRTGNNFSEFS	430	440	450	460	470	480	490
hu. 41-E	349	SEYQLPYVLGSAHQGCLPPFPADVFMIPOYGylTLNNG--SQAVGRSSFYCLEYFSPQMLRTGNNFSEFS	..... ..... ..... ..... ..... ..... ..... ..... ..... .....						
rh. 64-E	349	SEYQLPYVLGSAHQGCLPPFPADVFMIPOYGylTLNNG--SQAVGRSSFYCLEYFSPQMLRTGNNFSEFS							
hu. 42-E	349	SEYQLPYVLGSAHQGCLPPFPADVFMIPOYGylTLNNG--SQAVGRSSFYCLEYFSPQMLRTGNNFSEFS							
rh. 57-E	349	SEYQLPYVLGSAHQGCLPPFPADVFMIPOYGylTLNNG--SQAVGRSSFYCLEYFSPQMLRTGNNSEFS							
hu. 40-E	349	SEYQLPYVLGSAHQGCLPPFPADVFMIPOYGylTLNNG--SQAVGRSSFYCLEYFSPQMLRTGNNFQFT							
AAV8-E	349	SEYQLPYVLGSAHQGCLPPFPADVFMIPOYGylTLNNG--SQAVGRSSFYCLEYFSPQMLRTGNNFSEFS							
rh. 58-E	349	SEYQLPYVLGSAHQGCLPPFPADVFMIPOYGylTLNNG--SQAVGRSSFYCLEYFSPQMLRTGNNFSEFS							
rh. 40-E	349	SEYQLPYVLGSAHQGCLPPFPADVFMIPOYGylTLNNG--SQAVGRSSFYCLEYFSPQMLRTGNNFSEFS							
hu. 67-E	349	SEYQLPYVLGSAHQGCLPPFPADVFMIPOYGylTLNNG--SQAVGRSSFYCLEYFSPQMLRTGNNFSEFS							
hu. 17-E	349	SEYQLPYVLGSAHQGCLPPFPADVFMIPOYGylTLNNG--SQAVGRSSFYCLEYFSPQMLRTGNNFSEFS							
hu. 6-E	349	SEYQLPYVLGSAHQGCLPPFPADVFMIPOYGylTLNNG--SQAVGRSSFYCLEYFSPQMLRTGNNFSEFS							
hu. 66-E	349	SEYQLPYVLGSAHQGCLPPFPADVFMIPOYGylTLNNG--SQAVGRSSFYCLEYFSPQMLRTGNNFSEFS							
rh. 38-E	349	SEYQLPYVLGSAHQGCLPPFPADVFMIPOYGylTLNNG--SQAVGRSSFYCLEYFSPQMLRTGNNFQFS							
hu. 32-F	348	SDYQLPYVLGSAHEGCLPPFPADVFMIPOYGylTLNDG--SQAVGRSSFYCLEYFSPQMLRTGNNFQFS							
AAV9/hu	348	SDYQLPYVLGSAHEGCLPPFPADVFMIPOYGylTLNDG--SQAVGRSSFYCLEYFSPQMLRTGNNFQFS							
hu. 31-F	348	SDYQLPYVLGSAHEGCLPPFPADVFMIPOYGylTLNDG--SQAVGRSSFYCLEYFSPQMLRTGNNFQFS							
			..... ..... ..... ..... ..... ..... ..... ..... ..... .....						
AAV5	406	YNFEEVPFHSSFAPSQNLFLKANPLVDQYLRFVSTN-----NTGGVQFNKNLAGRYANTYKNWFPGP							
AAV3-3	413	YTFEDVPFHSSYAHSQSLDRMLNPLIDQLYLYLNRTQGTSTGTTNQSRLLFSQAGPQSMSLQARNWLPGP							
AAV4-4	407	YSFEKVPFHSSYAHSQSLDRMLNPLIDQYLWGLQSTTTGTTLNAGTATTNFTKLRPTNFSNEKKNWLPGP							
AAV1-A	414	YTFEEVPFHSSYAHSQSLDRMLNPLIDQLYLYLNRTQ-NQSGSAQNKDLLFSRGSAGMSVQPKNWLPGP							
hu. 46-A	414	YTFEEVPLHSSCAHSQSLDRMLNPLIDQLYLYLNRTQ-NQSGSAQNKDLLFSRGSAGMSVQPKNWLPGP							
hu. 48-A	414	YTFEEVPFHSSYAHSQSLDRMLNPLIDQLYLYPNRTQ-NQSGSAQNKDLLFSRGSAGMSVQPKNWLPGP							
hu. 44-A	414	YTFEEVPFHSSYAHSQSLDRMLNPLIVQLYLYLNRTQ-NQSGSAQNKDLLFSRGSAGMSVQPKNWLPGP							
hu. 43-A	415	YTFEEVPLHSSYAHSQSLDRMLNPLIDQLYLYLNRTQ-NQSGSAQNKDLLFSRGSAGMSVQPKNWLPGP							
AAV6-A	414	YTFEDVPFHSSYAHSQSLDRMLNPLIDQLYLYLNRTQ-NQSGSAQNKDLLFSRGSAGMSVQPKNWLPGP							
hu. 34-B	413	YTFEDVPFHSSYAHSQSLGRMLNPLIDQLYLYLNRTQ-NQSGSAQNKDLLFSRGSAGMSVQPKNWLPGP							

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hu.47-B 413 YTFEDVPFHSSYAHQSLSLDRMLNPLIDQYLYYLSTTN-TPSGTTTQSRQLQFSQAGASDIRDQSRNWLPGP  
hu.29-B 413 YTFEDVPFHSSYAHQSLSLDRMLNPLIDQYLYYLSRTN-TPSGTTTQSRQLQFSQAGASDIRDQSRNWLPGP  
hu.63-B 413 YTFEDVPFHSSYAHQSLSLDRMLNPLIDQYLYYLSRTN-TPSGTTTQSRQLQFSQAGASDIRDQSRNWLPGP  
hu.56-B 413 YTFEDVPFHSSYAHQSLSLDRMLNPLIDQYLYYLSRTN-TPSGTTTQSRQLQFSQAGASDIRDQSRNWLPGP  
hu.45-B 413 YTFEDVPFHSSYAHQSLSLDRMLNPLIDQYLYYLSRTN-TPSGTTTQSRQLQFSQAGASDIRDQSRNWLPGP  
hu.57-B 412 YTFEDVPFHSSYAHQSLSLDRMLNPLIDQYLYYLSRTN-TPSGTTTQSRQLQFSQAGASDIRDQSRNWLPGP  
hu.35-B 413 YTFEDVPFHSSYAHQSLSLGRMLNPLIDQYLYYLSRTN-TPSGTTTQSRQLQFSQAGASDIRDQSRNWLPGP  
hu.58-B 413 YTFEDVPFHSSYAHQSLSLDRMLNPLIDQYLYYLSRTN-TPSGTTTQSRQLQFSQAGASDIRDQSRNWLPGP  
hu.28-B 413 YTFEDVPFHSSYAHQSLSLDRMLNPLIDQYLYYLSRTN-TPSGTTTQSRQLQFSQAGASDIRDQSRNWLPGP  
hu.51-B 413 YTFEDVPFHSSYAHQSLSLDRMLNPLIDQYLYYLSRTN-TPSGTTTQSRQLQFSQAGASDIRDQSRNWLPGP  
hu.19-B 413 YTFEDVPFHSSYAHQSLSLDRMLNPLIDQYLYYLSRTN-TPSGTTTMSRQLQFSQAGASDIRDQSRNWLPGP  
hu.49-B 413 YTFEDVPFHSSYAHQSLSLDRMLNPLIDQYLYYLSRTN-TPSGTTTQSRQLQFSQAGASDIRDQSRNWLPGP  
hu.52-B 413 YTFEDVPFHSSYAHQSLSLDRMLNPLIDQYLYYLSRTN-TPSGTTTQSRQLQFSQAGASDIRDQSRNWLPGP  
hu.13-B 413 YTFEDVPFHSSYAHQSLSLDRMLNPLIDQYLYYLSRTN-TPSGTTTQSRQLQFSQAGASDIRDQSRNWLPGP  
AAV2-B 413 YTFEDVPFHSSYAHQSLSLDRMLNPLIDQYLYYLSRTN-TPSGTTTQSRQLQFSQAGASDIRDQSRNWLPGP  
hu.20-B 413 YTFEDVPFHSSYAHQSLSLDRMLNPLIDQYLYYLSRTN-TPSGTTTMSRQLQFSQAGASDIRDQSRNWLPGP  
hu.24-B 413 YTFEDVPFHSSYAHQSLSLDRMLNPLIDQYLYYLSRTN-TPSGTTTMSRQLQFSQAGASDIRDQSRNWLPGP  
hu.64-B 413 YTFEDVPFHSSYAHQSLSLDRMLNPLVDQYLYYLSRTN-TPSGTTTQSRQLQFSQAGASDIRDQSRNWLPGP  
hu.27-B 413 YTFEDVPFHSSYAHQSLSLDRMLNPLIDQYLYYLSRTN-TPSGTTTMSRQLQFSQAGASDVRDQSRNWLPGP  
hu.21-B 413 YTFEDVPFHSSYAHQSLSLDRMLNPLIDQYLYYLSRTN-TPSGTTTMSRQLQFSQAGASDIRDQSRNWLPGP  
hu.22-B 413 YTFEDVPFHSSYAHQSLSLDRMLNPLIDQYLYYLSRTN-TPSGTTTMSRQLQFSQAGASDIRDQSRNWLPGP  
hu.23-B 413 YTFEDVPFHSSYAHQSLSLDRMLNPLIDQYLYYLSRTN-TPSGTTTMSRQLQFSQAGASDIRDQSRNWLPGP  
hu.7-C 413 YTFEDVPFHSSYAHQSLSLDRMLNPLIDQYLYYLNKTQ-SNSGTLQQSRLLFSQAGPTSMSLQAKNWLPGP  
hu.61-C 413 YTFEDVPFHSSYAHQSLSLDRMLNPLIDQYLYYLNKTQ-TNSGTLQQSRLLFSQAGPTMSLQAKNWLPGP  
rh.56-C 413 YTFEDVPFHSSYAHQSLSLDRMLNPLIDQYLYYLNKTQ-SNSGALQQSRLLFSQAGPTSMSLQAKNWLPGP  
hu.9-C 413 YTFEDVPFHSSYAHQSLSLDRMLNPLIDQYLYYLNRTQ-SNSGTLQQSRLLFSQAGPTSMSLQAKNWLPGP  
hu.54-C 413 YTFEDVPFHSSYAHQSLSLDRMLNPLIDQYLYYLNRTQ-TASGT-QQSRLLFSQAGPTSMSLQAKNWLPGP  
hu.53-C 413 YTFEDVPFHSSYAHQSLSLDRMLNPLIDQYLYYLNRTQ-TASGT-QQSRLLFSQAGPTSMSLQAKNWLPGP  
hu.60-C 413 YTFEDVPFHSSYAHQSLSLDRMLNPLVDQYLYYLNKTQ-TNSGTLQQSRLLFSQAGPTMSLQAKNWLPGP  
hu.55-C 413 YTFEDVPFHSSYAHQSLSLDRMLNPLIDQYLYYLNRTQ-TASGT-QQSRLLFSQAGPTSMSLQAKNWLPGP

FIG. 2R



hu.2-C 413 YTFEDVPFHSSYAHQSLSLDRMLNPLIDQYLYLNKTQ-TNSGTLQQSRLLFSQAGPTNMSLQAKNWLPGP  
 hu.1-C 413 YTFEDVPFHSSYAHQSLSLDRMLNPLIDQYLYLNKTQ-TNSGTLQQSRLLFSQAGPTNMSLQAKNWLPGP  
 hu.18-C 413 YTFEDVPFHSSYAHQSLSLDRMLNPLIDQYLYLNKTQ-SNSGTLQQSRLLFSQAGPTNMSLQAKNWLPGP  
 hu.3-C 414 YTFEDVPFHSSYAHQSLSLDRMLNPLIDQYLYLNKTQ-TNSGTLQQSRLLFSQAGPTNMSLQAKNWLPGP  
 hu.25-C 413 YTFEDVPFHSSYAHQSLSLDRMLNPLIDQYLYLNKTQ-TNSGTLQQSRLLFSQAGPTNMSLQAKNWLPGP  
 hu.15-C 413 YTFEDVPFHSSYAHQSLSLDRMLNPLIDQYLYLNKTQ-SNSGTLQQSRLLFSQAGPTNMSLQAKNWLPGP  
 hu.16-C 413 YTFEDVPFHSSYAHQSLSLDRMLNPLIDQYLYLNKTQ-SNSGTLQQSRLLFSQAGPTNMSLQAKNWLPGP  
 hu.11-C 413 YTFEDVPFHSSYAHQSLSLDRMLNPLIDQYLYLNKTQ-SNSGTLQQSRLLFSQAGPTNMSLQAKNWLPGP  
 hu.10-C 413 YTFEDVPFHSSYAHQSLSLDRMLNPLIDQYLYLNKTQ-SNSGTLQQSRLLFSQAGPTNMSLQAKNWLPGP  
 hu.4-C 413 YTFEDVPFHSSYAHQSLSLDRMLNPLIDQYLYLNKTQ-TNSGTLQQSRLLFSQAGPTNMSLQAKNWLPGP  
 rh.54-D 415 YTFEDVPFHSSYAHQSLSLDRMLNPLIDQYLYLNKTQ-TNSGTLQQSRLLFSQAGPTNMSLQAKNWLPGP  
 rh.48-D 415 YTFEDVPFHSSYAHQSLSLDRMLNPLIDQYLYLNKTQ-TNSGTLQQSRLLFSQAGPTNMSLQAKNWLPGP  
 rh.55-D 415 YTFEDVPFHSSYAHQSLSLDRMLNPLIDQYLYLNKTQ-TNSGTLQQSRLLFSQAGPTNMSLQAKNWLPGP  
 rh.62-D 415 YTFEDVPFHSSYAHQSLSLDRMLNPLIDQYLYLNKTQ-TNSGTLQQSRLLFSQAGPTNMSLQAKNWLPGP  
 AAV7-D 415 YTFEDVPFHSSYAHQSLSLDRMLNPLIDQYLYLNKTQ-TNSGTLQQSRLLFSQAGPTNMSLQAKNWLPGP  
 rh.52-E 416 YTFEDVPFHSSYAHQSLSLDRMLNPLIDQYLYLNKTQ-TNSGTLQQSRLLFSQAGPTNMSLQAKNWLPGP  
 rh.51-E 416 YTFEDVPFHSSYAHQSLSLDRMLNPLIDQYLYLNKTQ-TNSGTLQQSRLLFSQAGPTNMSLQAKNWLPGP  
 hu.39-E 416 YTFEDVPFHSSYAHQSLSLDRMLNPLIDQYLYLNKTQ-TNSGTLQQSRLLFSQAGPTNMSLQAKNWLPGP  
 rh.53-E 416 YTFEDVPFHSSYAHQSLSLDRMLNPLIDQYLYLNKTQ-TNSGTLQQSRLLFSQAGPTNMSLQAKNWLPGP  
 hu.37-E 416 YTFEDVPFHSSYAHQSLSLDRMLNPLIDQYLYLNKTQ-TNSGTLQQSRLLFSQAGPTNMSLQAKNWLPGP  
 rh.43-E 415 YTFEDVPFHSSYAHQSLSLDRMLNPLIDQYLYLNKTQ-TNSGTLQQSRLLFSQAGPTNMSLQAKNWLPGP  
 rh.50-E 416 YTFEDVPFHSSYAHQSLSLDRMLNPLIDQYLYLNKTQ-TNSGTLQQSRLLFSQAGPTNMSLQAKNWLPGP  
 rh.49-E 416 YTFEDVPFHSSYAHQSLSLDRMLNPLIDQYLYLNKTQ-TNSGTLQQSRLLFSQAGPTNMSLQAKNWLPGP  
 rh.61-E 416 YTFEDVPFHSSYAHQSLSLDRMLNPLIDQYLYLNKTQ-TNSGTLQQSRLLFSQAGPTNMSLQAKNWLPGP  
 hu.41-E 416 YTFEDVPFHSSYAHQSLSLDRMLNPLIDQYLYLNKTQ-TNSGTLQQSRLLFSQAGPTNMSLQAKNWLPGP  
 rh.64-E 416 YTFEDVPFHSSYAHQSLSLDRMLNPLIDQYLYLNKTQ-TNSGTLQQSRLLFSQAGPTNMSLQAKNWLPGP  
 hu.42-E 416 YTFEDVPFHSSYAHQSLSLDRMLNPLIDQYLYLNKTQ-TNSGTLQQSRLLFSQAGPTNMSLQAKNWLPGP  
 rh.57-E 416 YTFEDVPFHSSYAHQSLSLDRMLNPLIDQYLYLNKTQ-TNSGTLQQSRLLFSQAGPTNMSLQAKNWLPGP  
 hu.40-E 416 YTFEDVPFHSSYAHQSLSLDRMLNPLIDQYLYLNKTQ-TNSGTLQQSRLLFSQAGPTNMSLQAKNWLPGP  
 AAV8-E 416 YTFEDVPFHSSYAHQSLSLDRMLNPLIDQYLYLNKTQ-TNSGTLQQSRLLFSQAGPTNMSLQAKNWLPGP



rh.58-E	416	YTFEDVPFHSSYAHSQSLDRMLNPLIDQYLYLSRTQS-TGGTAGTQQLFSQAGPSNMSAQARNWLPGP	500	510	520	530	540	550	560
rh.40-E	416	YTFEDVPFHSSYAHSQSLDRMLNPLIDQYLYLSRTQS-TGGTQGTQQLFSQAGPANMSARAKNWLPGP	.... .... .... .... .... .... .... .... .... .... ....						
hu.67-E	416	YTFEDVPFHSGYAHSQSLDRMLNPLIDQYLYLSRTQS-TGGTQGTQQLFSQAGPANMSAQAKNWLPGP							
hu.17-E	416	YQFEDVPFHSSYAHSQSLDRMLNPLIDQYLYLSRTQS-TGGTAGTQQLFSQAGPNNMSAQAKNWLPGP							
hu.6-E	416	YQFEDVPFHSSYAHSQSLDRMLNPLIDQYLYLSRTQS-TGGTAGTQQLFSQAGPNNMSAQAKNWLPGP							
hu.66-E	416	YTFEDVPFHSSCAHSQSSDRMLNPLIDQYLYLSRTQS-TGGTQGTQQLFSQAGPANMSAQAKNWLPGP							
rh.38-E	416	YTFEDVPFHSSYAHSQSLDRMLNPLIDQYLYLSRTQS-TGGTQGTQQLFSQAGPANMSAQAKNWLPGP							
hu.32-F	415	YEFENVPFHSSYAHSQSLDRMLNPLIDQYLYLSKTINGSG--QNQQTCLKFSVAGPSNMAVQGRNYIPGP							
AAV9/hu	415	YEFENVPFHSSYAHSQSLDRMLNPLIDQYLYLSKTINGSG--QNQQTCLKFSVAGPSNMAVQGRNYIPGP							
hu.31-F	415	YEFENVPFHSSYAHSQSLDRMLNPLIDQYLYLSKTINGSG--QNQQTCLKFSVAGPSNMAVQGRNYIPGP							

AAV5	469	MGRTOGWNLGSGVN-----RASVSATNRMELGASYQVPPQPNMGMTNNLQGSNTYALENTMIFNSQP	.... .... .... .... .... .... .... .... .... .... ....						
AAV3-3	483	CYRQORLSKTANDN-----NNSNFPWTAASKYHLNGRDSLVPNPGPAMASHKDDDEKFFPMMHGNLIFGKEG							
AAV4-4	477	SIKQQGFSKTANQYKIPATGSDSLIKYETHSTLDGRWSALTPGPPMATAGPADSKFS-NSQLIFAGPKQ							
AAV1-A	483	CYRQORVSKTKTDN-----NNSNFTWTGASKYNLNGRESIINPGTAMASHKDDDEKFFPMSGVMIFGKES							
hu.46-A	483	CYRQORVSKTKTDN-----NNSNFTWTGASKYNLNGRESIINPGTAMASHKDDDEKFFPMSGVMIFGKES							
hu.48-A	483	CYRQORVSKTKTDN-----NNSNFTWTGASKYNLNGRESIINPGTAVASHKDDDEKFFPMSGVMIFGKES							
hu.44-A	483	CYRQORVSKTKTDN-----NNSNFTWTGASKYNLNGRESIINPGTAMASHKDDDEKFFPMSGVMIFGKES							
hu.43-A	484	CYRQORVSKTKTDN-----NNSNFTWTGASKYNLNGRESIINPGTAMASHKDDDEKFFPMSGVMIFGKES							
AAV6-A	483	CYRQORVSKTKTDN-----NNSNFTWTGASKYNLNGRESIINPGTAMASHKDDKDEKFFPMSGVMIFGKES							
hu.34-B	482	CYRQORVSKTSADN-----NNSNFTWTGASKYNLNGRESIINPGTAMASHKDDDEKFFPMSGVLIIFGKQG							
hu.47-B	482	CYRQORVSKTSADN-----NNSNFTWTGASKYNLNGRESIINPGTAMASHKDDDEKFFPMSGVLIIFGKQG							
hu.29-B	482	CYRQORVSKTSADN-----NNSNFTWTGASKYNLNGRESIINPGTAMASHKDDDEKFFPMSGVLIIFGKQG							
hu.63-B	482	CYRQORVSKTSADN-----NNSNFTWTGASKYNLNGRESIINPGTAMASHKDDDEKFFPMSGVLIIFGKQD							
hu.56-B	482	CYRQORVSKTAADN-----NNSNFTWTGASKYNLNGRESIINPGTAMASHKDDDEKFFPMSGVLIIFGKQG							
hu.45-B	482	CYRQORVSKTSADN-----NNSNFTWTGASKYNLNGRESIINPGTAMASHKDDDEKFFPMSGVLIIFGKQG							
hu.57-B	481	CYRQORVSKTAADN-----NNSNFTWTGASKYNLNGRESIINPGTAMASHKDDDEKFFPMSGVLIIFGKQG							
hu.35-B	482	CYRQORVSKTSADN-----NNSNFTWTGASKYNLNGRESIINPGTAMASHKDDDEKFFPMSGVLIIFGKQG							

hu. 58-B 482 CYRQQRVSKTSADN-----NNSEYSWIGATKYHLNGRDSLVPNGPAMASHKDDDEEKFPPQSGVLIIFGKQG  
 hu. 28-B 482 CYRQQRVSKTSADN-----NNSEYSWTGATKYHLNGRDSLVPNGPAMASHKDDDEEKFPPQSGVLIIFGKQG  
 hu. 51-B 482 CYRQQRVSKTSADN-----NNSEYSWTGATKYHLNGRDSLVPNGPAMASHKDDDEEKFPPQSGVLIIFGKQG  
 hu. 19-B 482 CYRQQRVSKTAADN-----NNSDYSWTGATKYHLNGRDSLVPNGPAMASHKDDDEEKFPPQSGVLIIFGKQD  
 hu. 49-B 482 CYRQQRVSKTAADN-----NNSEYSWTGATKYHLNGRDSLVPNGPAMASHKDDDEEKFPPQSGVLIIFGKQG  
 hu. 52-B 482 CYRQQRVSKTSADN-----NNSEYSWTGATKYHLNGRDSLVPNGPAMASHKDDDEEKFPPQSGVLIIFGKQG  
 hu. 13-B 482 CYRQQRVSKTSADN-----NNSEYSWTGATKYHLNGRDSLVPNGPAMASHKDDDEEKFPPQSGVLIIFGKQG  
 AAV2-B 482 CYRQQRVSKTSADN-----NNSEYSWTGATKYHLNGRDSLVPNGPAMASHKDDDEEKFPPQSGVLIIFGKQG  
 hu. 20-B 482 CYRQQRVSKTAADN-----NNSDYSWTGATKYHLNGRDSLVPNGPAMASHKDDDEEKFPPQSGVLIIFGKQD  
 hu. 24-B 482 CYRQQRVSKTAADN-----NNSDYSWTGATKYHLNGRDSLVPNGPAMASHKDDDEEKFPPQSGVLIIFGKQD  
 hu. 64-B 482 CYRQQRVSKTSADN-----NNSEYSWTGATKYHLNGRDSLVPNGPAMASHKDDDEEKFPPQSGVLIIFGKQD  
 hu. 27-B 482 CYRQQRVSKTAADN-----NNSDYSWTGATKYHLNGRDSLVPNGPAMASHKDDDEEKFPPQSGVLIIFGKQD  
 hu. 21-B 482 CYRQQRVSKTAADN-----NNSDYSWTGATKYHLNGRDSLVPNGPAMASHKDDDEEKFPPQSGVLIIFGKQD  
 hu. 22-B 482 CYRQQRVSKTAADN-----NNSDYSWTGATKYHLNGRDSLVPNGPAMASHKDDDEEKFPPQSGVLIIFGKQD  
 hu. 23-B 482 CYRQQRVSKTAADN-----NNSDYSWTGATKYHLNGRDSLVPNGPAMASHKDDDEEKFPPQSGVLIIFGKQD  
 hu. 7-C 482 CYRQRLSKQANDN-----NNSNFPWTAATKYHLNGRDSLVPNGPAMASHKDDDEEKFPPMHGTLIFGKQG  
 hu. 61-C 482 CYRQRLSKQANDN-----NNSNFPWTAATKYHLNGRDSLVPNGPAMASHKDDDEEKFPPMHGTLIFGKQG  
 rh. 56-C 482 CYRQRLSKQANDN-----NNSNFPWTAATKYHLNGRDSLVPNGPAMASHKDDDEEKFPPMHGTLIFGKQG  
 hu. 9-C 482 CYRQRLSKQANDN-----NNSNFPWTAATKYHLNGRDSLVPNGPAMASHKDDDEEKFPPMHGTLIFGKQG  
 hu. 54-C 481 CYRQRLSKQANDN-----NNSNFPWTAATKYHLNNGDSLVPNGPAMASHKDDDEEKFPPMHGTLIFGKEG  
 hu. 53-C 481 CYRQRLSKQANDN-----NNSNFPWTAATKYHLNGRDSLVPNGPAMASHKDDDEEKFPPMHGTLIFGKEG  
 hu. 60-C 482 CYRQRLSKQANDN-----NNSNFPWTAATKYHLNGRDSLVPNGPAMASHKDDDEEKFPPMHGTLIFGKQG  
 hu. 55-C 481 CYRQRLSKQANDN-----NNSNFPWTAATKYHLNGRDSLVPNGPAMASHKDDDEEKFPPMHGTLIFGKEG  
 hu. 2-C 482 CYRQRLSKQANDN-----NNSNFPWTAATKYHLNGRDSLVPNGPAMASHKDDDEEKFPPMHGTLIFGKQG  
 hu. 1-C 482 CYRQRLSKQANGN-----NNSNFPWTAATKYHLNGRDSLVPNGPAMASHKDDDEEKFPPMHGTLIFGKQG  
 hu. 18-C 482 CYRQRLSKQANDN-----NNSNFPWTAATKYHLNGRDSLVPNGPAMASHKDDDEEKFPPMHGTLIFGKQG  
 hu. 3-C 483 CYRQRLSKQANDN-----NNSNFPWTAATKYHLNGRDSLVPNGPAMASHKDDDEEKFPPMHGTLIFGKQG  
 hu. 25-C 482 CYRQRLSKQANDN-----NNSNFPWTAATKYHLNGRDSLVPNGPAMASHKDDDEEKFPPMHGTLIFGKQG  
 hu. 15-C 482 CYRQRLSKQANDN-----NNSNFPWTAATKYHLNGRDSLVPNGPAMASHKDDDEEKFPPMHGTLIFGKQG  
 hu. 16-C 482 CYRQRLSKQANDN-----NNSNFPWTAATKYHLNGRDSLVPNGPAMASHKDDDEEKFPPMHGTLIFGKQG

hu.11-C 482 CYRQRLSKQANDN-----NNSNFPWTAATKYRLNGRDSLVPNGPAMASHKDDDEKFFPMHGTLI FGKQG  
 hu.10-C 482 CYRQRLSKQANDN-----NNSNFPWTAATKYHLNGRDSLVPNGPAMASHKDDDEKFFPMHGTLI FGKQG  
 hu.4-C 482 CYRQRLSKQANDN-----NNSNFPWTAATKYHLNGRDSLVPNGPAMASHKDDDEKFFPMHGTLI FGKQG  
 rh.54-D 485 CFRQQRVSKTLDQN-----NNSNFAWTGATKYHLNGRNSLVNPGVAMATHKDDDEDRFFPSSGVLI FGKTG  
 rh.48-D 485 CFRQQRVSKTLDQN-----NNSNFAWTGATKYHLNGRNSLVNPGVAMATHKDDDEERFFPSSGVLI FGKTG  
 rh.55-D 485 CFRQRRVSKTLDQN-----NNSNFAWTGATKYHLNGRNSLVNPGVAMATHKDDDEERFFPSSGVLI FGKTG  
 rh.62-D 485 CFRQQRVSKTLDQN-----NNSNFAWTGATKYHLNGRNSLVNPGVAMATHKDDDEERFFPSSGVLI FGKTG  
 AAV7-D 485 CFRQQRVSKTLDQN-----NNSNFAWTGATKYHLNGRNSLVNPGVAMATHKDDDEDRFFPSSGVLI FGKTG  
 rh.52-E 485 CYRQQRVSTTTSQN-----NNSNFAWTGATKYHLNGRDSLVPNGVAMATNKDDDEDRFFPSSGILMFGKQG  
 rh.51-E 485 CYRQQRVSTTTSQN-----NNSNFAWTGATKYHLNGRDSLVPNGVAMATNKDDDEDRFFPSSGILMFGKQG  
 hu.39-E 485 CYRQQRVSTTTSQN-----NNSNFAWTGATKYHLNGRDSLVPNGVAMATNKDDDEDRFFPSSGILMFGKQG  
 rh.53-E 485 CYRQQRVSTTTSQN-----NNSNFAWTGATKYHLNGRDSLVPNGVAMATNKDDDEDRFFPSSGILMFGKQG  
 hu.37-E 485 CYRQQRVSTTTSQN-----NNSNFAWTGATKYHLNGRDSLVPNGVAMATHKDDDEERFFPSSGVLMFGKQG  
 rh.43-E 484 CYRQQRVSTTTGQN-----NNSNFAWTAGTKYHLNGRNSLANPGIAMATHKDDDEERFFPVTG-SCFWQQN  
 rh.50-E 485 CYRQQRVSTTTSQN-----NNSNFAWTGATKYHLNGRDSLVPNGVAMATNKDDDEDRFFPSSGILMFGKQG  
 rh.49-E 485 CYRQQRVSTTTSQN-----NNSNFAWTGATKYHLNGRDSLVPNGVAMATNKDDDEDRFFPSSGILMFGKQG  
 rh.61-E 485 CYRQQRVSTTTSQN-----NNSNFAWTGATKYHLNGRDSLVPNGVAMATNKDDDEDRFFPSSGILMFGKQG  
 hu.41-E 485 CYRQQRVSTTTSQN-----NNSNFAWTGATKYHLNGRDSLVPNGVAMATHKDDDEERFFPSSGVLMFGKQG  
 rh.64-E 485 CYRQQRVSTTTSQN-----NNSNFAWTGATKYHLNGRDSLVPNGVAMATNKDDDEDRFFPSSGILMFGKQG  
 hu.42-E 485 CYRQQRVSTTTSQS-----NNSNFAWTGATKYHLNGRDSLVPNGVAMATHKDDDEERFFPSSGVLMFGKQG  
 rh.57-E 485 CYRQQRVSTTTSQN-----NNSNFAWTGATKYHLNGRDSLVPNGVAMATNKDDDEDRFFPSSGILMFGKQG  
 hu.40-E 485 CYRQQRVSTTTSQN-----NNSNFAWTGATKYHLNGRDSLVPNGVAMATHKDDDEERFFPSSGVLMFGKQG  
 AAV8-E 485 CYRQQRVSTTTGQN-----NNSNFAWTAGTKYHLNGRNSLANPGIAMATHKDDDEERFFPSNGILIFGKQN  
 rh.58-E 485 CYRQQRVSTTTSQN-----NNSNFAWTGATKYHLNGRDSLVPNGVAMATNKDDDEDRFFPSSGILMFGKQG  
 rh.40-E 485 CYRQQRVSTTTSQN-----NNSNFAWTGATKYHLNGRDSLVPNGVAMATHKDDDEERFFPSSGVLMFGKQG  
 hu.67-E 485 CYRQQRVSTTTSQN-----NNSNFAWTGATKYHLNGRDSLVPNGVAMATHKDDDEERFFPSSGVLMFGKQG  
 hu.17-E 485 CYRQQRVSTTTSQN-----NNSNFAWTGATKYHLNGRDSLVPNGVAMATHKDDDEERFFPSSGVLMFGKQG  
 hu.6-E 485 CYRQQRVSTTTSQN-----NNSNFAWTGATKYHLNGRDSLVPNGVAMATHKDDDEERFFPSSGVLMFGKQG  
 hu.66-E 485 CYRQQRVSTTTSQN-----NNSNFAWTGATKYHLNGRDSLVPNGVAMATHKDDDEERFFPSSGVLMFGKQG  
 rh.38-E 485 CYRQQRVSTTTSQN-----NNSNFAWTGATKYHLNGRDSLVPNGVAMATHKDDDEERFFPSSGVLMFGKQG

hu.32-F 483 SYRQQRVSTTVTQN-----NNSEFAWPAGSSWALNGRNSLMNPGPAMASHKEGEDRFFPLSGSLIFGKQG  
 AAV9/hu 483 SYRQQRVSTTVTQN-----NNSEFAWPAGSSWALNGRNSLMNPGPAMASHKEGEDRFFPLSGSLIFGKQG  
 hu.31-F 483 SYRQQRVSTTVTQN-----NNSEFAWPAGSSWALNGRNSLMNPGPAMASHKEGEDRFFPLSGSLIFGKQG  
  
 AAV5 534 ANPGTTATYLEGNMLITSESETQPVNRVAYNVGGQMATNNQSSSTTAPATGTYNLQEI VPGSVWMERDVYL  
 AAV3-3- 548 T--TASNAELD-NVMITDEEEI RTNPVATEQYGTVANLQSSNTAPT TGT VNHQ GALPGMVWQDRDVYL  
 AAV4-4- 546 N--GNTATVPG-TLIFTSEEE LAATNATDTDMWGNLPGGQSNLPTVDRLTALGAVPGMVWQNRDIYY  
 AAV1-A- 548 A--GASNTALD-NVMITDEEEI KATNPVATERFGTVAVNFQSSSTDPATGDVHAMGALPGMVWQDRDVYL  
 hu.46-A 548 A--GASNTALD-NVMITDEEEI KATNPVATERFGTVAVNFQSSSTDPATGDVHAMGALPGMVWQDRDVYL  
 hu.48-A 548 A--GASNTALD-NVMITDEEEI KATNPVATERFGTVAVNFQSSSTDPATGDVHAMGALPGMVWQDRDVYL  
 hu.44-A 548 A--GASNTALD-NVMITDEEEI KATNPVATERFGTVAVNFQSSSTDPATGDVHAMGALPGMVWQDRDVYL  
 hu.43-A 549 A--GASNTALD-NVMITDEEEI KATNPVATERFGTVAVNFQSSSTDPATGDVHAMGALPGMVWQDRDVYL  
 AAV6-A 548 A--GASNTALD-NVMITDEEEI RTNPVATEQYGSVSTNLQRGNRQAATADVNTQGVLPGMVWQDRDVYL  
 hu.34-B 547 S--EKTNVDIE-KVMITDEEEI RTNPVATEQYGSVSTNLQRGNRQAATADVNTQGVLPGMVWQDRDVYL  
 hu.47-B 547 S--EKTNVDIE-KVMITDEEEI RTNPVATEQYGSVSTNLQRGNRQAATADVNTQGVLPGMVWQDRDVYL  
 hu.29-B 547 P--EKTNVDIE-KVMITDEEEI RTNPVATEQYGSVSTNLQRGNRQAATADVNTQGVLPGMVWQDRDVYL  
 hu.63-B 547 S--GKTNVDIE-KVMITDEEEI RTNPVATEQYGSVSTNLQRGNRQAATADVNTQGVLPGMVWQDRDVYL  
 hu.56-B 547 S--EKTNVDIE-KVMITDEEEI RTNPVATEQYGSVSTNLQRGNRQAATADVNTQGVLPGMVWQDRDVYL  
 hu.45-B 547 S--EKTNVDIE-KVMITDEEEI RTNPVATEQYGSVSTNLQRGNRQAATADVNTQGVLPGMVWQDRDVYL  
 hu.57-B 546 S--EKTNVDIE-KVMITDEEEI RTNPVATEQYGSVSTNLQRGNRQAATADVNTQGVLPGMVWQDRDVYL  
 hu.35-B 547 S--EKTNVDIE-KVMITDEEEI RTNPVATEQYGSVSTNLQRGNRQAATADVNTQGVLPGMVWQDRDVYL  
 hu.58-B 547 S--EKTNVDIE-KVMITDEEEI RTNPVATEQYGSVSTNLQRGNRQAATADVNTQGVLPGMVWQDRDVYL  
 hu.28-B 547 S--EKTNVDIE-KVMITDEEEI RTNPVATEQYGSVSTNLQRGNRQAATADVNTQGVLPGMVWQDRDVYL  
 hu.51-B 547 S--EKTNVDIE-KVMITDEEEI RTNPVATEQYGSVSTNLQRGNRQAATADVNTQGVLPGMVWQDRDVYL  
 hu.19-B 547 S--GKTNVDIE-KVMITDEEEI RTNPVATEQYGSVSTNLQRGNRQAATADVNTQGVLPGMVWQDRDVYL  
 hu.49-B 547 S--EKTNVDIE-KVMITDEEEI RTNPVATEQYGSVSTNLQRGNRQAATADVNTQGVLPGMVWQDRDVYL  
 hu.52-B 547 S--EKTNVDIE-KVMITDEEEI RTNPVATEQYGSVSTNLQRGNRQAATADVNTQGVLPGMVWQDRDVYL  
 hu.13-B 547 S--EKTNVDIE-KVMITDEEEI RTNPVATEQYGSVSTNLQRGNRQAATADVNTQGVLPGMVWQDRDVYL

FIG. 2W

AAV2-B 547 S--EKTNVDIE-KVMITDEEEIRTTNPVATEQYGSVSTNLQRGNRQAATAADVNTQGVLPGMVWQDRDVYL

hu. 20-B 547 S--GKTNVDIE-KVMITDEEEIRTTNPVATEQYGSVSTNLQSGNTQAATSDVNTQGVLPGMVWQDRDVYL

hu. 24-B 547 S--GKTNVDIE-KVMITDEEEIRTTNPVATEQYGSVSTNLQSGNTQAATSDVNTQGVLPGMVWQDRDVYL

hu. 64-B 547 S--GKTNVDIE-KVMITDEEEIRTTNPVATEQYGSVSTNLQSGNTQAATSDVNTQGVLPGMVWQDRDVYL

hu. 27-B 547 S--GKTNVDIE-KVMITDEEEIRTTNPVATEQYGSVSTNLQSGNTQAATSDVNTQGVLPGMVWQDRDVYL

hu. 21-B 547 S--GKTNVDIE-KVMITDEEEIRTTNPVATEQYGSVSTNLQSGNTQAATSDVNTQGVLPGMVWQDRDVYL

hu. 22-B 547 S--GKTNVDIE-KVMITDEEEIRTTNPVATEQYGSVSTNLQSGNTQAATSDVNTQGVLPGMVWQDRDVYL

hu. 23-B 547 S--GKTNVDIE-KVMITDEEEIRTTNPVATEQYGSVSTNLQSGNTQAATSDVNTQGVLPGMVWQDRDVYL

hu. 7-C 547 T--NANDADLD-NVMITDEEEIRTTNPVATEQYGTVSNLQNSNTGPTTGTGNHQAALPGMVWQDRDVYL

hu. 61-C 547 T--NANDADLE-NVMITDEEEIRTTNPVATEQYGTVSNLQNSNTGPTTGTGNHQAALPGMVWQDRDVYL

rh. 56-C 547 T--NANDADLD-NVMITDEEEIRTTNPVATEQYGTVSNLQNSNTGPTTGTGNHQAALPGMVWQDRDVYL

hu. 9-C 547 T--NANDADLD-NVMITDEEEIRTTNPVATEQYGTVSNLQNSNTGPTTGTGNHQAALPGMVWQDRDVYL

hu. 54-C 546 T--NANDADLE-HVMITDEEEIRTTNPVATEQYGTVSNLQNSNTAASSTETVNHQAALPGMVWQDRDVYL

hu. 53-C 546 T--NATNAELE-NVMITDEEEIRTTNPVATEQYGTVSNLQNSNTAASSTETVNHQAALPGMVWQDRDVYL

hu. 60-C 547 T--NANDADLE-NVMITDEEEIRTTNPVATEQYGTVSNLQNSNTAASSTETVNHQAALPGMVWQDRDVYL

hu. 55-C 546 T--NATNAELE-NVMITDEEEIRTTNPVATEQYGTVSNLQNSNTGPTTGTGNHQAALPGMVWQDRDVYL

hu. 2-C 547 T--NANDADLE-NVMITDEEEIRATNPVATEQYGTVSNLQNSNTGPTTGTGNHQAALPGMVWQDRDVYL

hu. 1-C 547 T--NANDADLE-NVMITDEEEIRATNPVATEQYGTVSNLQNSNTGPTTGTGNHQAALPGMVWQDRDVYL

hu. 18-C 547 T--NANDADLD-NVMITDEEEIRTTNPVATEQYGTVSNLQNSNTGPTTGTGNHQAALPGMVWQDRDVYL

hu. 3-C 548 T--NANDADLE-NVMITDEEEIRTTNPVATEQYGTVSNLQNSNTGPTTGTGNHQAALPGMVWQDRDVYL

hu. 25-C 547 T--NANDADLE-NVMITDEEEIRTTNPVATEQYGTVSNLQNSNTGPTTGTGNHQAALPGMVWQDRDVYL

hu. 15-C 547 T--NANDADLD-NVMITDEEEIRTTNPVATEQYGTVSNLQNSNTGPTTGTGNHQAALPGMVWQDRDVYL

hu. 16-C 547 T--NANDADLD-NVMITDEEEIRTTNPVATEQYGTVSNLQNSNTGPTTGTGNHQAALPGMVWQDRDVYL

hu. 11-C 547 T--NANDADLE-HVMITDEEEIRTTNPVATEQYGTVSNLQNSNTGPTTGTGNHQAALPGMVWQDRDVYL

hu. 10-C 547 T--NANDADLE-HVMITDEEEIRTTNPVATEQYGTVSNLQNSNTGPTTGTGNHQAALPGMVWQDRDVYL

hu. 4-C 547 T--NANDADLE-NVMITDEEEIRATNPVATEQYGTVSNLQNSNTAASSTETVNHQAALPGMVWQDRDVYL

rh. 54-D 550 A--TN-KTTLE-NVMTNEEEIRPTNPVATEEYGTVSSNLQAANTAAQTQVNNQAALPGMVWQDRDVYL

rh. 48-D 550 A--AN-KTTLE-NVMTNEEEIRPTNPVATEEYGTVSSNLQAANTAAQTQVNNQAALPGMVWQDRDVYL

rh. 55-D 550 A--AN-KTTLE-NVMTNEEEIRPTNPVATEEYGTVSSNLQAANTAAQTQVNNQAALPGMVWQDRDVYL

rh. 62-D 550 A--AN-KTTLE-NVMTNEEEIRPTNPVATEEYGTVSSNLQAANTAAQTQVNNQAALPGMVWQDRDVYL

FIG. 2X

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AAV7-D 550 A--TN-KTTLE-NVLMTNEEEIIRPTNPVATEEYGI VSSNLQAANTAAQTQVVNNQGALPGMVWQNRD VYL

rh. 52-E 550 A--GKDNVDYS-NVMLTSEEEIKTTNPVATEQYGVVADNLQQQNTAPIVGAVNSQGALPGMVWQNRD VYL

rh. 51-E 550 A--GKDNVDYS-NVMLTSEEEIKTTNPVATEQYGVVADNLQQQNTAPIVGAVNSQGALPGMVWQNRD VYL

hu. 39-E 550 A--GKDNVDYS-NVMLTSEEEIKTTNPVATEQYGVVADNLQQQNTAPTGVAVNSQGALPGMVWQNRD VYL

rh. 53-E 550 A--GKDNVDYS-NVMLTSEEEIKTTNPVATEQYGVVADNLQQQNTAPIVGAVNSQGALPGMVWQNRD VYL

hu. 37-E 550 A--GRDNVDYS-SVMLTSEEEIKTTNPVATEQYGVVADNLQQTNTGPIVGNVNSQGALPGMVWQNRD VYL

rh. 43-E 548 A--ARDNADYS-DVMLTSEEEIKTTNPVATEEYGI VADNLQQQNTAPQIGTVNSQGALPGMVWQNRD VYL

rh. 50-E 550 A--GKDNVDYS-NVMLTSEEEIKTTNPVATEQYGVVADNLQQQNTAPIVGAVNSQGALPGMVWQNRD VYL

rh. 49-E 550 A--GKDNMGYS-NVMLTSEEEIKTTNPVATEQYGVVADNLQQQNTAPIVGAVNSQGALPGMVWQNRD VYL

rh. 61-E 550 A--GKDNVDYS-NVMLTSEEEIKTTNPVATEQYGVVADNLQQQD TAPIVGAVNSQGALPGMVWQNRD VYL

hu. 41-E 550 A--GRDNVDYS-SVMLTSEEEIKTTNPVATEQYGVVADNLQQTNTGPIVGNVNSQGALPGMVWQNRD VYL

rh. 64-E 550 A--GKDNVDYS-NVMLTSEEEIKTTNPVATEQYGVVADNLQQQNTAPIVGAVNSQGALPGMVWQNRD VYL

hu. 42-E 550 A--GRDNVDYS-SVMLTSEEEIKTTNPVATEQYGVVADNLQQTNTGPIVGNVNSQGALPGMVWQNRD VYL

rh. 57-E 550 A--GKDNVDYS-NVMLTSEEEIKTTNPVATEQYGVVADNLQQQNTAPIVGAVNSQGALPGMVWQNRD VYL

hu. 40-E 550 A--GRDNVDYS-SVMLTSEEEIKTTNPVATEQYGVVADNLQQTNTGPIVGNVNSQGALPGMVWQNRD VYL

AAV8-E 550 A--ARDNADYS-DVMLTSEEEIKTTNPVATEEYGI VADNLQQQNTAPQIGTVNSQGALPGMVWQNRD VYL

rh. 58-E 550 A--GKDNVDYS-NVMLTSEEEIKTTNPVATEQYGVVADNLQQQNTAPIVGAVNSQGALPGMVWQNRD VYL

rh. 40-E 550 A--GRDNVDYS-SVMLTSEEEIKTTNPVATEQYGVVADNLQQANTGPIVGNVNSQGALPGMVWQNRD VYL

hu. 67-E 550 A--GRDNVDYS-SVMLTSEEEIKTTNPVATEQYGVVADNLQQTNTGPIVGNVNSQGALPGMVWQNRD VYL

hu. 17-E 550 A--GKDNVDYS-SVMLTSEEEIKTTNPVATEQYGVVADNLQQQNAAPIVGAVNSQGALPGMVWQNRD VYL

hu. 6-E 550 A--GKDNVDYS-SVMLTSEEEIKTTNPVATEQYGVVADNLQQQNAAPIVGAVNSQGALPGMVWQNRD VYL

hu. 66-E 550 A--GRDNVDYS-SVMLTSEEEIKTTNPVATEQYGVVADNLQQTNTGPIVGNVNSQGALPGMVWQNRD VYL

rh. 38-E 550 A--GRDNVDYS-SVMLTSEEEIKTTNPVATEQYGVVADNLQQTNTGPIVGNVNSQGALPGMVWQNRD VYL

hu. 32-F 548 T--GRDNVDAD-KVMITNEEEIKTTNPVATESYGOVATNHQSAQQAQTAQTGWVQNQGILPGMVWQQRD VYL

AAV9/hu 548 T--GRDNVDAD-KVMITNEEEIKTTNPVATESYGOVATNHQSAQQAQTAQTGWVQNQGILPGMVWQQRD VYL

hu. 31-F 548 T--GRDNVDAD-KVMITNEEEIKTTNPVATESYGOVATNHQSAQQAQTAQTGWVQNQGILPGMVWQQRD VYL

604 Q̄GPIWAKIPETGAHFHPSAMGGFGLKHPPPMMLIKNTVPGN-ITSFSDVPVSSFITQYSTGQTVME

AAV5

FIG. 2Y

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AAV3-3 615 QGPIWAKIPHTDGHFHPSPMLGGFGLKHPPPPQIMIKNTPVPANPPTTFSPAKFASFITQYSTGQVSVEIE  
AAV4-4 613 QGPIWAKIPHTDGHFHPSPPLIGGFGLKHPPPPQIFIKNTPVPANPATTFSTPNSFITQYSTGQVSQID  
AAV1-A 615 QGPIWAKIPHTDGHFHPSPMLGGFGLKNPPPPQILIKNTPVPANPPAEFSATKFAFITQYSTGQVSVEIE  
hu.46-A 615 QGPIWAKIPHTDGHFHPSPMLGGFGLKNPPPPQILIKNTPVPANPPAEFSATKFAFITQYSAGQVSVEIE  
hu.48-A 615 QGPIWAKIPHTDGHFHPSPMLGGFGLKNPPPPQILIKNTPVPANPPAEFSATKFAFITQYSTGQVSVEIE  
hu.44-A 615 QGPIWAKIPHTDGHFHPSPMLGGFGLKNPPPPQILIKNTPVPANPPAEFSATKFAFITQYSTGQVSVEIE  
hu.43-A 616 QGPIWAKIPHTDGHFHPSPMLGGFGLKNPPPPQILIKNTPVPANPPAEFSATKFAFITQYSTGQVSVEIE  
AAV6-A 615 QGPIWAKIPHTDGHFHPSPMLGGFGLKHPPPPQILIKNTPVPANPPAEFSATKFAFITQYSTGQVSVEIE  
hu.34-B 614 QGPIWAKIPHTDGHFHPSPMLGGFGLKHPPPPQILIKNTPVPANPSTTFSAAKFAFITQYSTGQVSVEIE  
hu.47-B 614 QGPIWAKIPHTDGHFHPSPMLGGFGLKHPPPPQILIKNTPVPANPSTTFSAAKFAFITQYSTGQVSVEIE  
hu.29-B 614 QGPIWAKIPHTDGHFHPSPMLGGFGLKHPPPPQILIKNTPVPANPSTTFSAAKFAFITQYSTGQVSVEIE  
hu.63-B 614 QGPIWAKIPHTDGHFHPSPMLGGFGLKHPPPPQILIKNTPVPANPSTTFSAAKFAFITQYSTGQVSVEIE  
hu.56-B 614 QGPIWAKIPHTDGHFHPSPMLGGFGLKHPPPPQILIKNTPVPANPSTTFSAAKFAFITQYSTGQVSVEIE  
hu.45-B 614 QGPIWAKIPHTDGHFHPSPMLGGFGLKHPPPPQILIKNTPVPANPSTTFSAAKFAFITQYSTGQVSVEIE  
hu.57-B 613 QGPIWAKIPHTDGHFHPSPMLGGFGLKHPPPPQILIKNTPVPANPSTTFSAAKFAFITQYSTGQVSVEIE  
hu.35-B 614 QGPIWAKIPHTDGHFHPSPMLGGFGLKHPPPPQILIKNTPVPANPSTTFSAAKFAFITQYSTGQVSVEIE  
hu.58-B 614 QGPIWAKIPHTDGHFHPSPMLGGFGLKHPPPPQILIKNTPVPANPSTTFSAAKFAFITQYSTGRVSVEIE  
hu.28-B 614 QGPIWAKIPHTDGHFHPSPMLGGFGLKHPPPPQILIKNTPVPANPSTTFSAAKFAFITQYSTGQVSVEIE  
hu.51-B 614 QGPIWAKIPHTDGHFHPSPMLGGFGLKHPPPPQILIKNTPVPANPSTTFSAAKFAFITQYSTGQVSVEIE  
hu.19-B 614 QGPIWAKIPHTDGHFHPSPMLGGFGLKHPPPPQILIKNTPVPANPSTTFSAAKFAFITQYSTGQVSVEIE  
hu.49-B 614 QGPIWAKIPHTDGHFHPSPMLGGFGLKHPPPPQILIKNTPVPANPSTTFSAAKFAFITQYSTGQVSVEIE  
hu.52-B 614 QGPIWAKIPHTDGHFHPSPMLGGFGLKHPPPPQILIKNTPVPANPSTTFSAAKFAFITQYSTGQVSVEIE  
hu.13-B 614 QGPIWAKIPHTDGHFHPSPMLGGFGLKHPPPPQILIKNTPVPANPSTTFSAAKFAFITQYSTGQVSVEIE  
AAV2-B 614 QGPIWAKIPHTDGHFHPSPMLGGFGLKHPPPPQILIKNTPVPANPSTTFSAAKFAFITQYSTGQVSVEIE  
hu.20-B 614 QGPIWAKIPHTDGHFHPSPMLGGFGLKHPPPPQILIKNTPVPANPSTTFSAAKFAFITQYSTGQVSVEIE  
hu.24-B 614 QGPIWAKIPHTDGHFHPSPMLGGFGLKHPPPPQILIKNTPVPANPSTTFSAAKFAFITQYSTGQVSVEIE  
hu.64-B 614 QGPIWAKIPHTDGHFHPSPMLGGFGLKHPPPPQILIKNTPVPANPSTTFSAAKFAFITQYSTGQVSVEIE  
hu.27-B 614 QGPIWAKIPHTDGHFHPSPMLGGFGLKHPPPPQILIKNTPVPANPSTTFSAAKFAFITQYSTGQVSVEIE  
hu.21-B 614 QGPIWAKIPHTDGHFHPSPMLGGFGLKHPPPPQILIKNTPVPANPSTTFSAAKFAFITQYSTGQVSVEIE  
hu.22-B 614 QGPIWAKIPHTDGHFHPSPMLGGFGLKHPPPPQILIKNTPVPANPSTTFSAAKFAFITQYSTGQVSVEIE



hu.23-B 614 RGPIWAKIPHTDGHFHPSPMLGGFGLKHPPPPQILIKNTVPANPSTTFSAAKFASFITQYSTGQVSVEIE  
 hu.7-C 614 QGPIWAKIPHTDGHFHPSPMLGGFGLKHPPPPQIMIKNTVPANPPTNFSSAKFASFITQYSTGQVSVEIE  
 hu.61-C 614 QGPIWAKIPHTDGHFHPSPVLGGFGLKHPPPPQIMIKNTVPANPPTNFSSAKFASFITQYSTGQVSVEIE  
 rh.56-C 614 QGPIWAKIPHTDGHFHPSPMLGGFGLKHPPPPQIMIKNTVPANPPTNFSSAKFASFITQYSTGQVSVEIE  
 hu.9-C 614 QGPIWAKIPHTDGHFHPSPMLGGFGLKHPPPPQIMIKNTVPANPPTNFSSAKFASFITQYSTGQVSVEIE  
 hu.54-C 613 RGPIWAKIPHADGHFHPSPMLGGFGLKHPPPPQIMIKNTVPANPPTNFSSAKFASFITQYSTGQVSVEIE  
 hu.53-C 613 QGPIWAKIPHTDGHFHPSPMLGGFGLKHPPPPQIMIKNTVPANPPTNFSSAKFASFITQYSTGQVSVEIE  
 hu.60-C 614 QGPIWAKIPHTDGHFHPSPMLGGFGLKHPPPPQIMIKNTVPANPPTNFSSAKFASFITQYSTGQVSVEIE  
 hu.55-C 613 QGPIWAKIPHTDGHFHPSPMLGGFGLKHPPPPQIMIKNTVPANPPTNFSSAKFASFITQYSTGQVSVEIE  
 hu.2-C 614 QGPIWAKIPHTDGHFHPSPMLGGFGLKHPPPPQIMIKNTVPANPPTNFSSAKFASFITQYSTGQVSVEIE  
 hu.1-C 614 QGPIWAKIPHTDGHFHPSPMLGGFGLKHPPPPQIMIKNTVPANPPTNFSSAKFASFITQYSTGQVSVEIE  
 hu.18-C 614 QGPIWAKIPHTDGHFHPSPMLGGFGLKHPPPPQIMIKNTVPANPPTNFSSAKFASFITQYSTGQVSVEIE  
 hu.3-C 615 QGPIWAKIPHTDGHFHPSPMLGGFGLKHPPPPQIMIKSTVPANPPTNFSSAKFASFITQYSTGQVSVEIE  
 hu.25-C 614 QGPIWAKIPHTDGHFHPSPMLGGFGLKHPPPPQIMIKNTVPANPPTNFSSAKFASFITQYSTGQVSVEIE  
 hu.15-C 614 QGPIWAKIPHTDGHFHPSPMLGGFGLKHPPPPQIMIKNTVPANPPTNFSSAKFASFITQYSTGQVSVEIE  
 hu.16-C 614 QGPIWAKIPHTDGHFHPSPMLGGFGLKHPPPPQIMIKNTVPANPPTNFSSAKFASFITQYSTGQVSVEIE  
 hu.11-C 614 QGPIWAKIPHTDGHFHPSPMLGGFGLKHPPPPQIMIKNTVPANPPTNFSSAKFASFITQYSTGQVSVEIE  
 hu.10-C 614 QGPIWAKIPHTDGHFHPSPMLGGFGLKHPPPPQIMIKNTVPANPPTNFSSAKFASFITQYSTGQVSVEIE  
 hu.4-C 614 QGPIWAKIPHTDGHFHPSPMLGGFGLKHPPPPQIMIKNTVPANPPTNFSSAKFASFITQYSTGQVSVEIE  
 rh.54-D 616 QGPIWAKIPHTDGNFHPSPMLGGFGLKHPPPPQILIKNTVPANPPEVTPAKFASFITQYSTGQVSVEIE  
 rh.48-D 616 QGPIWAKIPHTDGNFHPSPMLGGFGLKHPPPPQILIKNTVPANPPEVTPAKFASFITQYSTGQVSVEIE  
 rh.55-D 616 QGPIWAKIPHTDGNFHPSPMLGGFGLKHPPPPQILIKNTVPANPPEVTPAKFASFITQYSTGQVSVEIE  
 rh.62-D 616 QGPIWAKIPHTDGNFHPSPMLGGFGLKHPPPPQILIKNTVPANPPEVTPAKFASFITQYSTGQVSVEIE  
 AAV7-D 616 QGPIWAKIPHTDGNFHPSPMLGGFGLKHPPPPQILIKNTVPANPPEVTPAKFASFITQYSTGQVSVEIE  
 rh.52-E 617 QGPIWAKIPHTDGNFHPSPMLGGFGLKHPPPPQILIKNTVPADPPTAFNQAALNSFITQYSTGQVSVEIE  
 rh.51-E 617 QGPIWAKIPHTDGNFHPSPMLGGFGLKHPPPPQILIKNTVPADPPTAFNQAALNSFITQYSTGQVSVEIE  
 hu.39-E 617 QGPIWAKIPHTDGNFHPSPMLGGFGLKHPPPPQILIKNTVPADPPTAFNQAALNSFITQYSTGQVSVEIE  
 rh.53-E 617 QGPIWAKIPHTDGNFHPSPMLGGFGLKHPPPPQILIKNTVPADPPTAFNQAALNSFITQYSTGQVSVEIE  
 hu.37-E 617 QGPIWAKIPHTDGNFHPSPMLGGFGLKHPPPPQILIKNTVPADPPTTFSAKLASFITQYSTGQVSVEIE  
 rh.43-E 615 QGPIWAKIPHTDGNFHPSPMLGGFGLKHPPPPQILIKNTVPADPPTTFNQSALNSFITQYSTGQVSVEIE

FIG. 2AA



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rh. 50-E	617	QGPIWAKIPHTDGNFHPSPMLGGFGLKHPPPPQILIKNTVPADPPTAFNQAKLNSFITQYSTGQVSVEIE
rh. 49-E	617	QGPIWAKIPHTDGNFHPSPMLGGFGLKHPPPPQILIKNTVPADPPTAFNQAKLNSFITQYSTGQVSVEIE
rh. 61-E	617	QGPIWAKIPHTDGNFHPSPMLGGFGLKHPPPPQILIKNTVPADPPTAFNQAKLNSFITQYSTGQVSVEIE
hu. 41-E	617	QGPIWAKIPHTDGNFHPSPMLGGFGLKHPPPPQILIKNTVPADPPTTFSQAKLASFITQYSTGQVSVEIE
rh. 64-E	617	QGPIWAKIPHTDGNFHPSPMLGGFGLKHPPPPQILIKNTVPADPPTAFNQAKLNSFITQYSTGQVSVEIV
hu. 42-E	617	QGPIWAKIPHTDGNFHPSPMLGGFGLKHPPPPQILIKNTVPADPPTTFSQAKLASFITQYSTGQVSVEIE
rh. 57-E	617	QGPIWAKIPHTDGNFHPSPMLGGFGLKHPPPPQILIKNTVPADPPTAFNQAKLNSFITQYSTGQVSAEIE
hu. 40-E	617	QGPIWAKIPHTDGNFHPSPMLGGFGLKHPPPPQILIKNTVPADPPTTFSQAKLASFITQYSTGQVSVEIE
AAV8-E	617	QGPIWAKIPHTDGNFHPSPMLGGFGLKHPPPPQILIKNTVPADPPTTFNQSKLNSFITQYSTGQVSVEIE
rh. 58-E	617	QGPIWAKIPHTDGNFHPSPMLGGFGLKHPPPPQILIKSTVPADPPTAFNQAKLNSFITQYSTGQVSVEIE
rh. 40-E	617	QGPIWAKIPHTDGNFHPSPMLGGFGLKHPPPPQILIKNTVPADPPTTFSQAKLASFITQYSTGQVSVEIE
hu. 67-E	617	QGPIWAKIPHTDGNFHPSPMLGGFGLKHPPPPQILIKNTVPADPPTTFSQAKLASFITQYSTGQVSVEIE
hu. 17-E	617	QGPIWAKIPHTDGNFHPSPMLGGFGLKHPPPPQILIKNTVPADPPTTFSQAKLASFITQYSTGQVSVEIE
hu. 6-E	617	QGPIWAKIPHTDGNFHPSPMLGGFGLKHPPPPQILIKNTVPADPPTTFSQAKLASFITQYSTGQVSVEIE
hu. 66-E	617	QGPIWAKIPHTDGNFHPSPMLGGFGLKHPPPPQILIKNTVPADPPTTFSQAKLASFITQYSTGQVSVEIE
rh. 38-E	617	QGPIWAKIPHTDGNFHPSPMLGGFGLKHPPPPQILIKNTVPADPPTTFSQAKLASFITQYSTGQVSVEIE
hu. 32-F	615	QGPIWAKIPHTDGNFHPSPMLGGFGMKHPPPPQILIKNTVPADPPTAFNKDKLNSFITQYSTGQVSVEIE
AAV9/hu	615	QGPIWAKIPHTDGNFHPSPMLGGFGMKHPPPPQILIKNTVPADPPTAFNKDKLNSFITQYSTGQVSVEIE
hu. 31-F	615	QGPIWAKIPHTDGNFHPSPMLGGFGMKHPPPPQILIKNTVPADPPTAFNKDKLNSFITQYSTGQVSVEIE

		710	720	730	740	750
		.... .... .... .... .... .... .... .... .... ....				
AAV5	673	WELKENS KRWNPEIQYTNNYNDPQFVDFAPDSTGEYRTRPIGTRYLTRPL*				
AAV3-3	685	WELQENS KRWNPEIQYTSNYNKS VNVDFTVDNGLYTEPRPIGTRYLTRNL*				
AAV4-4	683	WEIQERS KRWNPEVQFTSNYGOQNSLLWAPDAAGKYTEPRAIGTRYLTRHL*				
AAV1-A	685	WELQENS KRWNPEVQYTSNYAKSANVDFTVDNGLYTEPRPIGTRYLTRPL*				
hu. 46-A	685	WELQENS KRWNPEVQYTSNYAKSANVDFTVDNGLYTEPRPIGTRYLTRPL*				
hu. 48-A	685	WELQENS KRWNPEVQYTSNYAKSANVDFTVDNGLYTEPRPIGTRYLTRPL*				
hu. 44-A	685	WELQENS KRWNPEVQYTSNYAKSANVDFTVDNGLYTEPRPIGTRYLTRPL*				
hu. 43-A	686	WELQENS KRWNPEVQYTSNYAKSANVDFTVDNGLYTEPRPIGTRYLTRPL*				

FIG. 2AB

AAV6-A	685	WELQKENS	KRWNPEVQY	TSNYAKS	ANVDF	TVDN	NGLYTE	PRPIG	TRYLTRPL*
hu.34-B	684	WELQKENS	KRWNPEIQY	TSNYNKS	VNVDF	TVDT	NGVYSE	PRPIG	TRYLTRNL*
hu.47-B	684	WELQKENS	KRWNPEIQY	TSNYNKS	VNVDF	TVDT	NGVYSE	PRPIG	TRYLTRNL*
hu.29-B	684	WELQKENS	KRWNPEIQY	TSNYNKS	VNVDF	TVDT	NGVYSE	PRPIG	TRYLTRNL*
hu.63-B	684	WELQKENS	KRWNPEIQY	TSNYNKS	VNVDF	TVDT	NGVYSE	PRPIG	TRYLTRNL*
hu.56-B	684	WELQKENS	KRWNPEIQY	TSNYNKS	VNVDF	TVDT	NGVYSE	PRPIG	TRYLTRNL*
hu.45-B	684	WELQKENS	KRWNPEIQY	TSNYNKS	VNVDF	TVDT	NGVYSE	PRPIG	TRYLTRNL*
hu.57-B	683	WELQKENS	KRWNPEIQY	TSNYNKS	VNVDF	TVDT	NGVYSE	PRPIG	TRYLTRNL*
hu.35-B	684	WELQKENS	KRWNPEIQY	TSNYNKS	VNVDF	TVDT	NGVYSE	PRPIG	TRYLTRNL*
hu.58-B	684	WELQKENS	KRWNPEIQY	TSNYNKS	VNVDF	TVDT	NGVYSE	PRPIG	TRYLTRNL*
hu.28-B	684	WELQKENS	KRWNPEIQY	TSNYNKS	VNVDF	TVDT	NGVYSE	PRPIG	TRYLTRNL*
hu.51-B	684	WELQKENS	KRWNPEIQY	TSNYNKS	VNVDF	TVDT	NGVYSE	PRPIG	TRYLTRNL*
hu.19-B	684	WELQKENS	KRWNPEIQY	TSNYNKS	VNVDF	TVDT	NGVYSE	PRPIG	TRYLTRNL*
hu.49-B	684	WELQKENS	KRWNPEIQY	TSNYNKS	VNVDF	TVDT	NGVYSE	PRPIG	TRYLTRNL*
hu.52-B	684	WELQKENS	KRWNPEIQY	TSNYNKS	VNVDF	TVDT	NGVYSE	PRPIG	TRYLTRNL*
hu.13-B	684	WELQKENS	KRWNPEIQY	TSNYNKS	VNVDF	TVDT	NGVYSE	PRPIG	TRYLTRNL*
AAV2-B	684	WELQKENS	KRWNPEIQY	TSNYNKS	VNVDF	TVDT	NGVYSE	PRPIG	TRYLTRNL*
hu.20-B	684	WELQKENS	KRWNPEIQY	TSNYNKS	VNVDF	TVDT	NGVYSE	PRPIG	TRYLTRNL*
hu.24-B	684	WELQKENS	KRWNPEIQY	TSNYNKS	VNVDF	TVDT	NGVYSE	PRPIG	TRYLTRNL*
hu.64-B	684	WELQKENS	KRWNPEIQY	TSNYNKS	VNVDF	TVDT	NGVYSE	PRPIG	TRYLTRNL*
hu.27-B	684	WELQKENS	KRWNPEIQY	TSNYNKS	VNVDF	TVDT	NGVYSE	PRPIG	TRYLTRNL*
hu.21-B	684	WELQKENS	KRWNPEIQY	TSNYNKS	VNVDF	TVDT	NGVYSE	PRPIG	TRYLTRNL*
hu.22-B	684	WELQKENS	KRWNPEIQY	TSNYNKS	VNVDF	TVDT	NGVYSE	PRPIG	TRYLTRNL*
hu.23-B	684	WELQKENS	KRWNPEIQY	TSNYNKS	VNVDF	TVDT	NGVYSE	PRPIG	TRYLTRNL*
hu.7-C	684	WELQKENS	KRWNPEIQY	TSNYNKS	VNVDF	TVDT	NGVYSE	PRPIG	TRYLTRNL*
hu.61-C	684	WELQKENS	KRWNPEIQY	TSNYNKS	VNVDF	TVDT	NGVYSE	PRPIG	TRYLTRNL*
rh.56-C	684	WELQKENS	KRWNPEIQY	TSNYNKS	VNVDF	TVDT	NGVYSE	PRPIG	TRYLTRNL*
hu.9-C	684	WELQKENS	KRWNPEIQY	TSNYNKS	VNVDF	TVDT	NGVYSE	PRPIG	TRYLTRNL*
hu.54-C	683	WELQKENS	KRWNPEIQY	TSNYNKS	VNVDF	TVDT	NGVYSE	PRPIG	TRYLTRNL*
hu.53-C	683	WELQKENS	KRWNPEIQY	TSNYNKS	VNVDF	TVDT	NGVYSE	PRPIG	TRYLTRNL*

FIG. 2AC

hu. 60-C 684 WELQENSKRWNPEIQYTSNYSKSNVDFTVDTNGVYSEPRPIGTRYLTRNL\*  
 hu. 55-C 683 WELQENSKRWNPEIQYTSNYSKSNVDFTVDTNGVYSEPRPIGTRYLTRNL\*  
 hu. 2-C 684 WELQENSKRWNPEIQYTSNYSKSNVDFTVDTNGVYSEPRPIGTRYLTRNL\*  
 hu. 1-C 684 WELQENSKRWNPEIQYTSNYSKSNVDFTVDTNGVYSEPRPIGTRYLTRNL\*  
 hu. 18-C 684 WELQENSKRWNPEIQYTSNYSKSNVDFTVDTNGVYSEPRPIGTRYLTRNL\*  
 hu. 3-C 685 WELQENSKRWNPEIQYTSNYSKSNVDFTVDTNGVYSEPRPIGTRYLTRNL\*  
 hu. 25-C 684 WELQENSKRWNPEIQYTSNYSKSNVDFTVDTNGVYSEPRPIGTRYLTRNL\*  
 hu. 15-C 684 WELQEDSKRWNPEIQYTSNYSKSNVDFTVDTNGVYSEPRPIGTRYLTRNL\*  
 hu. 16-C 684 WELQENSKRWNPEIQYTSNYSKSNVDFTVDTNGVYSEPRPIGTRYLTRNL\*  
 hu. 11-C 684 WELQENSKRWNPEIQYTSNYSKSNVDFTVDTNGVYSEPRPIGTRYLTRNL\*  
 hu. 10-C 684 WELQENSKRWNPEIQYTSNYSKSNVDFTVDTNGVYSEPRPIGTRYLTRNL\*  
 hu. 4-C 684 WELQENSKRWNPEIQYTSNYSKSNVDFTVDTNGVYSEPRPIGTRYLTRNL\*  
 rh. 54-D 686 WELQENSKRWNPEIQYTSNFDKQTVGDFAVDSQGVYSEPRPIGTRYLTRNL\*  
 rh. 48-D 686 WELQENSKRWNPEIQYTSNFDKQTVGDFAVDSQGVYSEPRPIGTRYLTRNL\*  
 rh. 55-D 686 WELQENSKRWNPEIQYTSNFDKQTVGDFAVDSQGVYSEPRPIGTRYLTRNL\*  
 rh. 62-D 686 WELQENSKRWNPEIQYTSNFDKQTVGDFAVDSQGVYSEPRPIGTRYLTRNL\*  
 AAV7-D 686 WELQENSKRWNPEIQYTSNFEKQTVGDFAVDSQGVYSEPRPIGTRYLTRNL\*  
 rh. 52-E 687 WELQENSKRWNPEIQYTSNYSKSNVDFAVNTEGVYSEPRPIGTRYLTRNL\*  
 rh. 51-E 687 WEPQENSKRWNPEIQYTSNYSKSNVDFAVNTEGVYSEPRPIGTRYLTRNL\*  
 hu. 39-E 687 WELQENSKRWNPEIQYTSNYSKSNVDFAVNTEGVYSEPRPIGTRYLTRNL\*  
 rh. 53-E 687 WELQENSKRWNPEIQYTSNYSKSNVDFAVNTEGVYSEPRPIGTRYLTRNL\*  
 hu. 37-E 687 WELQENSKRWNPEIQYTSNYSKSNVDFAVNTEGVYSEPRPIGTRYLTRNL\*  
 rh. 43-E 685 WELQENSKRWNPEIQYTSNYSKSNVDFAVNTEGVYSEPRPIGTRYLTRNL\*  
 rh. 50-E 687 WELQENSKRWNPEIQYTSNYSKSNVDFAVNTEGVYSEPRPIGTRYLTRNL\*  
 rh. 49-E 687 WELQENSKRWNPEIQYTSNYSKSNVDFAVNTEGVYSEPRPIGTRYLTRNL\*  
 rh. 61-E 687 WELQENSKRWNPEIQYTSNYSKSNVDFAVNTEGVYSEPRPIGTRYLTRNL\*  
 hu. 41-E 687 WELQENSKRWNPEIQYTSNYSKSNVDFAVNTEGVYSEPRPIGTRYLTRNL\*  
 rh. 64-E 687 WELQENSKRWNPEIQYTSNYSKSNVDFAVNTEGVYSEPRPIGTRYLTRNL\*  
 hu. 42-E 687 WELQENSKRWNPEIQYTSNYSKSNVDFAVNTEGVYSEPRPIGTRYLTRNL\*  
 rh. 57-E 687 WELQENSKRWNPEIQYTSNYSKSNVDFAVNTEGVYSEPRPIGTRYLTRNL\*

FIG. 2AD

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hu.40-E	687	WELQENSKRWNPEIQYTSNYYKSTNVDFAVNTEGTYSEPRPIGTRYLTRNL*
AAV8-E	687	WELQENSKRWNPEIQYTSNYYKSTVDFAVNTEGVYSEPRPIGTRYLTRNL*
rh.58-E	687	WELQENSKCWNPEIQYTSNYYKSTNVDFAVNTEGVYSEPRPIGTRYLTRNL*
rh.40-E	687	WELQENSKRWNPEIQYTSNYYKSTNVDFAVNSEGTYSEPRPIGTRYLTRNL*
hu.67-E	687	WELQENSKRWNPEIQYTSNYYKSTNVDFAVNTEGTYSEPRPIGTRYLTRNL*
hu.17-E	687	WELQENSKRWNPEIQYTSNYYKSTNVDFAVNTEGTYSEPRPIGTRYLTRNL*
hu.6-E	687	WELQENSKRWNPEIQYTSNYYKSTNVDFAVNTEGTYSEPRPIGTRYLTRNL*
hu.66-E	687	WELQENSKRWNPEIQYTSNYYKSTNVDFAVNTEGTYSEPRPIGTRYLTRNL*
rh.38-E	687	WELQENSKRWNPEIQYTSNYYKSTNVDFAVNTEGTYSEPRPIGTRYLTRNL*
hu.32-F	685	WELQENSKRWNPEIQYTSNYYKSNNVEFAVNTEGVYSEPRPIGTRYLTRNL*
AAV9/hu	685	WELQENSKRWNPEIQYTSNYYKSNNVEFAVNTEGVYSEPRPIGTRYLTRNL*
hu.31-F	685	WELQENSKRWNPEIQYTSNYYKSNNVEFAVSTEGVYSEPRPIGTRYLTRNL*

FIG. 2AE

FIG. 3A

hu. 27-B	1	ATGGCTGCCGATGGTTATCTTCCAGATTGGCTCGAGGACACTCTCTCTGAAGGAATAAGACAGTGGTGGA
hu. 21-B	1	ATGGCTGCCGATGGTTATCTTCCAGATTGGCTCGAGGACACCCCTCTCTGAAGGAATAAGACAGTGGTGGA
hu. 22-B	1	ATGGCTGCCGATGGTTATCTTCCAGATTGGCTCGAGGACACTCTCTCTGAAGGAATAAGACAGTGGTGGA
hu. 23-B	1	ATGGCTGCCGATGGTTATCTTCCAGATTGGCTCGAGGACACTCTCTCTGAAGGAATAAGACAGTGGTGGA
hu. 7-C	1	ATGGCTGCCGATGGTTATCTTCCAGATTGGCTCGAGGACACTCTCTCTGAAGGAATAAGACAGTGGTGGA
hu. 61-C	1	ATGGCTGCCGATGGTTATCTTCCAGATTGGCTCGAGGACACTCTCTCTGAAGGAATAAGACAGTGGTGGA
rh. 56-C	1	ATGGCTGCCGATGGTTATCTTCCAGATTGGCTCGAGGACACTCTCTCTGAAGGAATAAGACAGTGGTGGA
hu. 9-C	1	ATGGCTGCCGATGGTTATCTTCCAGATTGGCTCGAGGACACTCTCTCTGAAGGAATAAGACAGTGGTGGA
hu. 54-C	1	ATGGCTGCCGATGGTTATCTTCCAGATTGGCTCGAGGACACTCTCTCTGAAGGAATAAGACAGTGGTGGA
hu. 53-C	1	ATGGCTGCCGATGGTTATCTTCCAGATTGGCTCGAGGACACTCTCTCTGAAGGAATAAGACAGTGGTGGA
hu. 60-C	1	ATGGCTGCCGATGGTTATCTTCCAGATTGGCTCGAGGACACTCTCTCTGAAGGAATAAGACAGTGGTGGA
hu. 55-C	1	ATGGCTGCCGATGGTTATCTTCCAGATTGGCTCGAGGACACTCTCTCTGAAGGAATAAGACAGTGGTGGA
hu. 2-C	1	ATGGCTGCCGATGGTTATCTTCCAGATTGGCTCGAGGACACTCTCTCTGAAGGAATAAGACAGTGGTGGA
hu. 1-C	1	ATGGCTGCCGATGGTTATCTTCCAGATTGGCTCGAGGACACTCTCTCTGAAGGAATAAGACAGTGGTGGA
hu. 18-C	1	ATGGCTGCCGATGGTTATCTTCCAGATTGGCTCGAGGACACTCTCTCTGAAGGAATAAGACAGTGGTGGA
hu. 3-C	1	ATGGCTGCCGATGGTTATCTTCCAGATTGGCTCGAGGACACTCTCTCTGAAGGAATAAGACAGTGGTGGA
hu. 25-C	1	ATGGCTGCCGATGGTTATCTTCCAGATTGGCTCGAGGACACTCTCTCTGAAGGAATAAGACAGTGGTGGA
hu. 15-C	1	ATGGCTGCCGATGGTTATCTTCCAGATTGGCTCGAGGACACTCTCTCTGAAGGAATAAGACAGTGGTGGA
hu. 16-C	1	ATGGCTGCCGATGGTTATCTTCCAGATTGGCTCGAGGACACTCTCTCTGAAGGAATAAGACAGTGGTGGA
hu. 11-C	1	ATGGCTGCCGATGGTTATCTTCCAGATTGGCTCGAGGACACTCTCTCTGAAGGAATAAGACAGTGGTGGA
hu. 10-C	1	ATGGCTGCCGATGGTTATCTTCCAGATTGGCTCGAGGACACTCTCTCTGAAGGAATAAGACAGTGGTGGA
hu. 4-C	1	ATGGCTGCCGATGGTTATCTTCCAGATTGGCTCGAGGACACTCTCTCTGAAGGAATAAGACAGTGGTGGA
rh. 54-D	1	ATGGCTGCTGACGGTTATCTTCCAGATTGGCTCGAGGACAACTCTCTGAGGGCATTCGCGAGTGGTGGG
rh. 48-D	1	ATGGCTGCTGACGGTTATCTTCCAGATTGGCTCGAGGACAACTCTCTGAGGGCATTCGCGAGTGGTGGG
rh. 55-D	1	ATGGCTGCCGATGGTTATCTTCCAGATTGGCTCGAGGACAACTCTCTGAGGGCATTCGCGAGTGGTGGG
rh. 62-D	1	ATGGCTGCTGACGGTTATCTTCCAGATTGGCTCGAGGACAACTCTCTGAGGGCATTCGCGAGTGGTGGG
AAV7-D	1	ATGGCTGCCGATGGTTATCTTCCAGATTGGCTCGAGGACAACTCTCTGAGGGCATTCGCGAGTGGTGGG
rh. 52-E	1	ATGGCTGCCGATGGTTATCTTCCAGATTGGCTCGAGGACAACTCTCTGAGGGCATTCGCGAGTGGTGGG
rh. 51-E	1	ATGGTTGCCGATGGTTATCTTCCAGATTGGCTCGAGGACAACTCTCTGAGGGCATTCGCGAGTGGTGGG
hu. 39-E	1	ATGGCTGCCGATGGTTATCTTCCAGATTGGCTCGAGGACAACTCTCTGAGGGCATTCGCGAGTGGTGGG

FIG. 3B

rh. 53-E	1	ATGGCTGCCGATGGTTATCTTCCAGATTGGCTCGAGGACAACCTCTCTGAGGGCATTCGCGAGTGGTGGG	80	90	100	110	120	130	140
hu. 37-E	1	ATGGCTGCTGACGGTTATCTTCCAGATTGGCTCGAGGACAACCTCTCTGAGGGCATTCGCGAGTGGTGGG	..... ..... ..... ..... ..... ..... ..... ..... ..... .....						
rh. 43-E	1	ATGGCTGCCGATGGTTATCTTCCAGATTGGCTCGAGGACAACCTCTCTGAGGGCATTCGCGAGTGGTGGG	GCCTTGAAGCGGGCCACCCGAAACCCAAATCAGCAGCATCAAGATCAAGCCCGTGGTCTTGTGCT						
rh. 50-E	1	ATGGCTGCCGATGGTTATCTTCCAGATTGGCTCGAGGACAACCTCTCTGAGGGCATTCGCGAGTGGTGGG	CTCTGAAACCTGGAGTCCCTCAACCCAAAGCGAACCACCAACACCCAGGACAACCGTCGGGGTCTTGTGCT						
rh. 49-E	1	ATGGCTGCCGATGGTTATCTTCCAGATTGGCTCGAGGACAACCTCTCTGAGGGCATTCGCGAGTGGTGGG	CGCTGCAACCTGGAGCCCCCTAAACCCCAAGGCAATCAACAACATCAGGACAACGCTCGGGGTCTTGTGCT						
rh. 61-E	1	ATGGCTGCCGATGGTTATCTTCCAGATTGGCTCGAGGACAACCTCTCTGAGGGCATTCGCGAGTGGTGGG	ACTTGAAACCTGGAGCCCCGAGCCCAAGCCCAACGAAAGCAGGACGACGCGCGGGGTCTGTGCT						
hu. 41-E	1	ATGGCTGCCGATGGTTATCTTCCAGATTGGCTCGAGGACAACCTCTCTGAGGGCATTCGCGAGTGGTGGG	AGCTCAAAACCTGGCCCCACCCACCAAGCCCCGAGCGGGCATTAAGGACGACAGCAGGGGTCTTGTGCT						
rh. 64-E	1	ATGGCTGCCGATGGTTATCTTCCAGATTGGCTCGAGGACAACCTCTCTGAGGGCATTCGCGAGTGGTGGG							
hu. 42-E	1	ATGGCTGCTGACGGTTATCTTCCAGATTGGCTCGAGGACAACCTCTCTGAGGGCATTCGCGAGTGGTGGG							
rh. 57-E	1	ATGGCTGCCGATGGTTATCTTCCAGATTGGCTCGAGGACAACCTCTCTGAGGGCATTCGCGAGTGGTGGG							
hu. 40-E	1	ATGGCTGCTGACGGTTATCTTCCAGATTGGCTCGAGGACAACCTCTCTGAGGGCATTCGCGAGTGGTGGG							
AAV8-E	1	ATGGCTGCCGATGGTTATCTTCCAGATTGGCTCGAGGACAACCTCTCTGAGGGCATTCGCGAGTGGTGGG							
rh. 58-E	1	ATGGCTGCTGACGGTTATCTTCCAGATTGGCTCGAGGACAACCTCTCTGAGGGCATTCGCGAGTGGTGGG							
rh. 40-E	1	ATGGCTGCTGACGGTTATCTTCCAGATTGGCTCGAGGACAACCTCTCTGAGGGCATTCGCGAGTGGTGGG							
hu. 67-E	1	ATGGCTGCTGACGGTTATCTTCCAGATTGGCTCGAGGACAACCTCTCTGAGGGCATTCGCGAGTGGTGGG							
hu. 17-E	1	ATGGCTGCCGATGGTTATCTTCCAGATTGGCTCGAGGACAACCTCTCTGAGGGCATTCGCGAGTGGTGGG							
hu. 6-E	1	ATGGCTGCCGATGGTTATCTTCCAGATTGGCTCGAGGACAACCTCTCTGAGGGCATTCGCGAGTGGTGGG							
hu. 66-E	1	ATGGCTGCTGACGGTTATCTTCCAGATTGGCTCGAGGACAACCTCTCTGAGGGCATTCGCGAGTGGTGGG							
rh. 38-E	1	ATGGCTGCTGACGGTTATCTTCCAGATTGGCTCGAGGACAACCTCTCTGAGGGCATTCGCGAGTGGTGGG							
hu. 32-F	1	ATGGCTGCCGATGGTTATCTTCCAGATTGGCTCGAGGACAACCTCTCTGAGGGCATTCGCGAGTGGTGGG							
AAV9/hu	1	ATGGCTGCCGATGGTTATCTTCCAGATTGGCTCGAGGACAACCTCTCTGAGGGCATTCGCGAGTGGTGGG							
hu. 31-F	1	ATGGCTGCCGATGGTTATCTTCCAGATTGGCTCGAGGACAACCTCTCTGAGGGCATTCGCGAGTGGTGGG							

FIG. 3C

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hu. 48-A	71	ACTTGAACCTGGAGCCCCGAAGCCCCAAAGCCAAACCAGCAAAAGCAGGACGACGGCCGGGCTCTGGTGCT
hu. 44-A	71	AGTCTAGACCTGGCCCCACCAACCAAAAGCCCGAGAGCGGCATAAGGACGACAGCAGGGGCTCTTGCTGCT
hu. 43-A	71	ACCTGAACCTGGAGCCCCCAAGCCCAAGGCCAAACCAGCAGAAAGCAGGACGACGGCCGGGCTCTGGTGCT
AAV6-A	71	ACTTGAACCTGGAGCCCCCGAAACCCAAAGCCAAACCAGCAAAAGCAGGACGACGGCCGGGCTCTGGTGCT
hu. 34-B	71	AGTCAAAACCTGGCCCCACCAACCAACAGAGCCCGAGAGCGGCATAAGGACGACAGCAGGGGCTCTTGCTGCT
hu. 47-B	71	AGTCAAAACCTGGCCCCACCAACCAAAAGCCCGAGAGCGGCATAGGACGACAGCAGGGGCTCTTGCTGCT
hu. 29-B	71	AGTCAAAACCTGGCCCCACCAACCAAAAGCCCGAGAGCGGCATAAGGACGACAGCAGGGGCTCTTGCTGCT
hu. 63-B	71	AGTCAAAACCTGGCCCCACCAACCAAAAGCCCGAGAGCGGCATAAGGACGACAGCAGGGGCTCTTGCTGCT
hu. 56-B	71	AGTCAAAACCTGGCCCCACCAACCAAAAGCCCGAGAGCGGCATAAGGACGACAGCAGGGGCTCTTGCTGCT
hu. 45-B	71	AGTCAAAACCTGGCCCCACCAACCAAAAGCCCGAGAGCGGCATAAGGACGACAGCAGGGGCTCTTGCTGCT
hu. 57-B	71	AGTCAAAACCTGGCCCCACCAACCAAAAGCCCGAGAGCGGCATAAGGACGACAGCAGGGGCTCTTGCTGCT
hu. 35-B	71	AGTCAAAACCTGGCCCCACCAACCAAGCCCGAGAGCGGCATAAGGACGACAGCAGGGGCTCTTGCTGCT
hu. 58-B	71	AGTCAAAACCTGGCCCCACCAACCAAGCCCGAGAGCGGCATAAGGACGACAGCAGGGGCTCTTGCTGCT
hu. 28-B	71	AACTCAAAACCTGGCCCCACCAACCAAGCCCGAGAGCGGCATAAGGACGACAGCAGGGGCTCTTGCTGCT
hu. 51-B	71	AGTCAAAACCTGGCCCCACCAACCAAGCCCGAGAGCGGCATAAGGACGACAGCAGGGGCTCTTGCTGCT
hu. 19-B	71	AGTCAAAACCTGGCCCCACCAACCAAGCCCGAGAGCGGCATAAGGACGACAGCAGGGGCTCTTGCTGCT
hu. 49-B	71	AGTCAAAACCTGGCCCCACCAACCAAGCCCGAGAGCGGCATAAGGACGACAGCAGGGGCTCTTGCTGCT
hu. 52-B	71	AGTCAAAACCTGGCCCCACCAACCAAGCCCGAGAGCGGCATAAGGACGACAGCAGGGGCTCTTGCTGCT
hu. 13-B	71	AGTCAAAACCTGGCCCCACCAACCAAGCCCGAGAGCGGCATAAGGACGACAGCAGGGGCTCTTGCTGCT
AAV2-B	71	AGTCAAAACCTGGCCCCACCAACCAAGCCCGAGAGCGGCATAAGGACGACAGCAGGGGCTCTTGCTGCT
hu. 20-B	71	AGTCAAAACCTGGCCCCACCAACCAAGCCCGAGAGCGGCATAAGGACGACAGCAGGGGCTCTTGCTGCT
hu. 24-B	71	AGTCAAAACCTGGCCCCACCAACCAAGCCCGAGAGCGGCATAAGGACGACAGCAGGGGCTCTTGCTGCT
hu. 64-B	71	AGTCAAAACCTGGCCCCACCAACCAAGCCCGAGAGCGGCATAAGGACGACAGCAGGGGCTCTTGCTGCT
hu. 27-B	71	AGTCAAAACCTGGCCCCACCAACCAAGCCCGAGAGCGGCATAAGGACGACAGCAGGGGCTCTTGCTGCT
hu. 21-B	71	AGTCAAAACCTGGCCCCACCAACCAAGCCCGAGAGCGGCATAAGGACGACAGCAGGGGCTCTTGCTGCT
hu. 22-B	71	AGTCAAAACCTGGCCCCACCAACCAAGCCCGAGAGCGGCATAAGGACGACAGCAGGGGCTCTTGCTGCT
hu. 23-B	71	AGTCAAAACCTGGCCCCACCAACCAAGCCCGAGAGCGGCATAAGGACGACAGCAGGGGCTCTTGCTGCT
hu. 7-C	71	AGTCAAAACCTGGCCCCACCAACCAAGCCCGAGAGCGGCATAAGGACGACAGCAGGGGCTCTTGCTGCT
hu. 61-C	71	AGTCAAAACCTGGCCCCACCAACCAAGCCCGAGAGCGGCATAAGGACGACAGCAGGGGCTCTTGCTGCT
rh. 56-C	71	AGTCAAAACCTGGCCCCACCAACCAAGCCCGAGAGCGGCATAAGGACGACAGCAGGGGCTCTTGCTGCT

FIG. 3D



hu. 9-C	71	AGCTCAAACCTGGCCCCACCAACCAAGCCCGCAGAGCGGCATCAGGACAACAGACAGGGGTCTTGTGCT
hu. 54-C	71	AGCTCAAACCTGGCCCCACCAACCAAGCCCGCAGAGCGGCATAAGGACGACAGAGGGTCTTGTGCT
hu. 53-C	71	AGCTCAAACCTGGCCCCACCAACCAAGCCCGCAGAGCGGCATAAGGACGACAGAGGGTCTTGTGCT
hu. 60-C	71	AGCTCAAACCTGGCCCCACCAACCAAGCCCGCAGAGCGGCATAAGGACGACAGAGGGTCTTGTGCT
hu. 55-C	71	AGCTCAAACCTGGCCCCACCAACCAAGCCCGCAGAGCGGCATAAGGACGACAGAGGGTCTTGTGCT
hu. 2-C	71	AGCTCAAACCTGGCCCCACCAACCAAGCCCGCAGAGCGGCATAAGGACGACAGAGGGTCTTGTGCT
hu. 1-C	71	AGCTCAAACCTGGCCCCACCAACCAAGCCCGCAGAGCGGCATAAGGACGACAGAGGGTCTTGTGCT
hu. 18-C	71	AGCTCAAACCTGGCCCCACCAACCAAGCCCGCAGAGCGGCATAAGGACGACAGAGGGTCTTGTGCT
hu. 3-C	71	AGCTCAAACCTGGCCCCACCAACCAAGCCCGCAGAGCGGCATAAGGACGACAGAGGGTCTTGTGCT
hu. 25-C	71	AGCTCAAACCTGGCCCCACCAACCAAGCCCGCAGAGCGGCATAAGGACGACAGAGGGTCTTGTGCT
hu. 15-C	71	AGCTCAAACCTGGCCCCACCAACCAAGCCCGCAGAGCGGCATAAGGACGACAGAGGGTCTTGTGCT
hu. 16-C	71	AGCTCAAACCTGGCCCCACCAACCAAGCCCGCAGAGCGGCATAAGGACGACAGAGGGTCTTGTGCT
hu. 11-C	71	AGCTCAAACCTGGCCCCACCAACCAAGCCCGCAGAGCGGCATCAGGACGACAGAGGGTCTTGTGCT
hu. 10-C	71	AGCTCAAACCTGGCCCCACCAACCAAGCTCGCAGAGCGGCATCAGGACGACAGAGGGTCTTGTGCT
hu. 4-C	71	AGCTCAAACCTGGCCCCACCAACCAAGCCCGCAGAGCGGCATAAGGACGACAGAGGGTCTTGTGCT
rh. 54-D	71	ACCTGAAACCTGGAGCCCCGAAACCCAAAGCCCAACCAAGCAGAGGACGACGAGGCGGTCTTGTGCT
rh. 48-D	71	ACCTGAAACCTGGAGCCCCGAAAGGCCCAACCAAGCAGAGGACGACGAGGCGGTCTTGTGCT
rh. 55-D	71	ACCTGAAACCTGGAGCCCCGAAACCCAAAGCCCAACCAAGCAGAGGACGACGAGGCGGTCTTGTGCT
rh. 62-D	71	ACCTGAAACCTGGAGCCCCGAAAGGCCCAACCAAGCAGAGGACGACGAGGCGGTCTTGTGCT
AAV7-D	71	ACCTGAAACCTGGAGCCCCGAAACCCAAAGCCCAACCAAGCAGAGGACGACGAGGCGGTCTTGTGCT
rh. 52-E	71	ACCTGAAACCTGGAGCCCCGAAACCCAAAGCCCAACCAAGCAGAGGACGACGAGGCGGTCTTGTGCT
rh. 51-E	71	ACCTGAAACCTGGAGCCCCGAAACCCAAAGCCCAACCAAGCAGAGGACGACGAGGCGGTCTTGTGCT
hu. 39-E	71	ACCTGAAACCTGGAGCCCCGAAACCCAAAGCCCAACCAAGCAGAGGACGACGAGGCGGTCTTGTGCT
rh. 53-E	71	ACCTGAAACCTGGAGCCCCGAAACCCAAAGCCCAACCAAGCAGAGGACGACGAGGCGGTCTTGTGCT
hu. 37-E	71	ACCTGAAACCTGGAGCCCCGAAAGGCCCAACCAAGCAGAGGACGACGAGGCGGTCTTGTGCT
rh. 43-E	71	ACCTGAAACCTGGAGCCCCGAAACCCAAAGCCCAACCAAGCAGAGGACGACGAGGCGGTCTTGTGCT
rh. 50-E	71	ACCTGAAACCTGGAGCCCCGAAACCCAAAGCCCAACCAAGCAGAGGACGACGAGGCGGTCTTGTGCT
rh. 49-E	71	ACCTGAAACCTGGAGCCCCGAAACCCAAAGCCCAACCAAGCAGAGGACGACGAGGCGGTCTTGTGCT
rh. 61-E	71	ACCTGAAACCTGGAGCCCCGAAACCCAAAGGCCCAACCAAGCAGAGGACGACGAGGCGGTCTTGTGCT
hu. 41-E	71	ACCTGAAACCTGGAGCCCCGAAAGGCCCAACCAAGCAGAGGACGACGAGGCGGTCTTGTGCT

FIG. 3E

rh. 64-E	71	ACCTGAAACCTGGAGCCCCGAAACCCAAAGCCAAACCAAGCCAAAGCAGGACGACGGCCGGGGTCTGGTGCT	150	160	170	180	190	200	210
hu. 42-E	71	ACCTGAAACCTGGAGCCCCCAAGCCCCAAGGCCAACCAAGCAGCAGAAAGCAGGACGACGGCCGGGGTCTGGTGCT	.... .... .... .... .... .... .... .... .... .... .... .... .... .... .... ....						
rh. 57-E	71	CGCTGAAACCTGGAGCCCCGAAAGCCCCAAAGCCAAACCAAGCAGGACGACGGCCGGGGTCTGGTGCT	GCCTGGTTATAACTATCTCGGACCCCGGAAACGGTCTCGATCGAGGAGAGCCCTGTCAACAGGGCAGACGAG						
hu. 40-E	71	ACCTGAAACCTGGAGCCCCCAAGCCCCAAGGCCAAACCAAGCAGGACGACGGCCGGGGTCTGGTGCT	TCCGGGTACAAATACCTCGGACCCCGGTAACGGACTCGACAAAGGAGAGCCCGGTCAACGAGCGGACGCG						
AAV8-E	71	CGCTGAAACCTGGAGCCCCGAAAGCCCCAAGCCAAACCAAGCAGGACGACGGCCGGGGTCTGGTGCT	TCCGGGTACAAATACCTCGGACCCCGGCAACGGACTCGACAAAGGGGAACCCGTCAACGACGCGGACGCG						
rh. 58-E	71	ACCTGAAACCTGGAGCCCCCAAGCCCCAAGGCCAAACCAAGCAGGACGACGGCCGGGGTCTGGTGCT	TCCCTGGCTACAAGTACCTCGGACCCCTTCAACGGACTCGACAAAGGGGAGCCCGTCAACGCGGCGGACGCA						
rh. 40-E	71	ACCTGAAACCTGGAGCCCCCAAGCCCCAAGGCCAAACCAAGCAGGACGACGGCCGGGGTCTGGTGCT	TCCCTGGGTACAAGTACCTCGGACCCCTTCAACGGACTCGACAAAGGGGAGCCCGTCAACGCGGCGGACGCA						
hu. 67-E	71	ACCTGAAACCTGGAGCCCCCAAGCCCCAAGGCCAAACCAAGCAGGACGACGGCCGGGGTCTGGTGCT	TCCCTGGGTACAAGTACCTCGGACCCCTTCAACGGACTCGACAAAGGGGAGCCCGTCAACGCGGCGGACGCA						
hu. 17-E	71	ACTTGAAACCTGGAGCCCCCGAAACCCAAAGCCAAACCAAGCAGGACGACGGCCGGGGTCTGGTGCT	TCCCTGGCTACAAGTACCTCGGACCCCTTCAACGGACTCGACAAAGGGGAGCCCGTCAACGCGGCGGATGCA						
hu. 6-E	71	ACTTGAAACCTGGAGCCCCCGAAACCCAAAGCCAAACCAAGCAGGACGACGGCCGGGGTCTGGTGCT	TCCCTGGGTACAAGTACCTCGGACCCCTTCAACGGACTCGACAAAGGGGAGCCCGTCAACGCGGCGGATGCA						
hu. 66-E	71	ACCTGAAACCTGGAGCCCCCGAAACCCAAAGCCAAACCAAGCAGGACGACGGCCGGGGTCTGGTGCT	TCCCTGGGTACAAGTACCTCGGACCCCTTCAACGGACTCGACAAAGGGGAGCCCGTCAACGCGGCGGATGCA						
rh. 38-E	71	ACCTGAAACCTGGAGCCCCCGAAACCCAAAGCCAAACCAAGCAGGACGACGGCCGGGGTCTGGTGCT	TCCCTGGGTACAAGTACCTCGGACCCCTTCAACGGACTCGACAAAGGGGAGCCCGTCAACGCGGCGGATGCA						
hu. 32-F	71	AGCTCAAACCTGGCCCCACCAACCCAAAGCCCGCAGAGCGGCATAAGGACGACAGCGGGTCTTGTGCT	TCCCTGGGTACAAGTACCTCGGACCCCTTCAACGGACTCGACAAAGGGGAGCCCGTCAACGCGGCGGATGCA						
AAV9/hu	71	CTTTGAAACCTGGAGCCCCCTCAACCCCAAGGCCAAATCAACAACATCAAGACAACGCTCGAGGTCTTGTGCT	TCCCTGGGTACAAGTACCTCGGACCCCTTCAACGGACTCGACAAAGGGGAGCCCGTCAACGCGGCGGATGCA						
hu. 31-F	71	AGCTCAAACCTGGCCCCCACCAACCCAAAGCCCGCAGAGCGGCATAAGGACGACAGCGGGTCTTGTGCT	TCCCTGGGTACAAGTACCTCGGACCCCTTCAACGGACTCGACAAAGGGGAGCCCGTCAACGCGGCGGATGCA						
AAV5	138		.... .... .... .... .... .... .... .... .... .... .... .... .... .... .... ....						
AAV3-3	141		GCCTGGTTATAACTATCTCGGACCCCGGAAACGGTCTCGATCGAGGAGAGCCCTGTCAACAGGGCAGACGAG						
AAV4-4	138		TCCGGGTACAAATACCTCGGACCCCGGTAACGGACTCGACAAAGGAGAGCCCGGTCAACGAGCGGACGCG						
AAV1-A	141		TCCGGGTACAAATACCTCGGACCCCGGCAACGGACTCGACAAAGGGGAACCCGTCAACGACGCGGACGCG						
hu. 46-A	141		TCCCTGGCTACAAGTACCTCGGACCCCTTCAACGGACTCGACAAAGGGGAGCCCGTCAACGCGGCGGACGCA						
hu. 48-A	141		TCCCTGGCTACAAGTACCTCGGACCCCTTCAACGGACTCGACAAAGGGGAGCCCGTCAACGCGGCGGACGCA						
hu. 44-A	141		TCCCTGGGTACAAGTACCTCGGACCCCTTCAACGGACTCGACAAAGGGGAGCCCGTCAACGCGGCGGACGCG						
hu. 43-A	141		TCCCTGGCTACAAGTACCTCGGACCCCTTCAACGGACTCGACAAAGGGGAGCCCGTCAACGCGGCGGACGCA						
AAV6-A	141		TCCCTGGCTACAAGTACCTCGGACCCCTTCAACGGACTCGACAAAGGGGAGCCCGTCAACGCGGCGGATGCA						
hu. 34-B	141		TCCCTGGGTACAAGTACCTCGGACCCCTTCAACGGACTCGACAAAGGGGAGCCCGTCAACGCGGCGGATGCA						
hu. 47-B	141		TCCCTGGGTACAAGTACCTCGGACCCCTTCAACGGACTCGACAAAGGGGAGCCCGTCAACGCGGCGGATGCA						
hu. 29-B	141		TCCCTGGGTACAAGTACCTCGGACCCCTTCAACGGACTCGACAAAGGGGAGCCCGTCAACGCGGCGGATGCA						

FIG. 3F

hu. 63-B	141	TCCTGGGTACAAGTACCTTGGACCCCTTCAACGGACTCGACAAGGGAGAGCCGGTCAACGAGGCAGACGCC
hu. 56-B	141	TCCTGGATACAAAGTACCTCGGACCCCTTCAACGGACTCGACAAGGGAGAGCCGGTCAACGAGGCAGACGCC
hu. 45-B	141	TCCTGGGTACAAGTACCTCGGACCCCTTCAACGGACTCGACAAGGGAGAGCCGGTCAACGAGGCAGACGCC
hu. 57-B	138	TCCTGGATACAAGTACCTCGGACCCCTTCAACGGACTCGACAAGGGAGAGCCGGTCAACGAGGCAGACGCC
hu. 35-B	141	TCCTGGGTACAAGTACCTCGGACCCCTTCAACGGACTCGACAAGGGAGAGCCGGTCAACGAGGCAGACGCC
hu. 58-B	141	TCCTGGGTACAAGTACCTCGGACCCCTTCAACGGACTCGACAAGGGAGAGCCGGTCAACGAGGCAGACGCC
hu. 28-B	141	TCCTGGGTACAAGTACCTCGGACCCCTTCAACGGACTCGACAAGGGAGAGCCGGTCAACGAGGCAGACGCC
hu. 51-B	141	TCCTGGGTACAAGTACCTCGGACCCCTTCAACGGACTCGACAAGGGAGAGCCGGTCAACGAGGCAGACGCC
hu. 19-B	141	TCCTGGGTACAAGTACCTCGGACCCCTTCAACGGACTCGACAAGGGAGAGCCGGTCAACGAGGCAGACGCC
hu. 49-B	141	TCCTGGGTACAAGTACCTCGGACCCCTTCAACGGACTCGACAAGGGAGAGCCGGTCAACGAGGCAGACGCC
hu. 52-B	141	TCCTGGGTACAAGTACCTCGGACCCCTTCAACGGACTCGACAAGGGAGAGCCGGTCAACGAGGCAGACGCC
hu. 13-B	141	TCCTGGGTACAAGTACCTCGGACCCCTTCAACGGACTCGACAAGGGAGAGCCGGTCAACGAGGCAGACGCC
AAV2-B	141	TCCTGGGTACAAGTACCTCGGACCCCTTCAACGGACTCGACAAGGGAGAGCCGGTCAACGAGGCAGACGCC
hu. 20-B	141	TCCTGGGTACAGGTACCTCGGACCCCTTCAACGGACTCGACAAGGGAGAGCCGGTCAACGAGGCAGACGCC
hu. 24-B	141	TCCTGGGTACAAGTACCTCGGACCCCTTCAACGGACTCGACAAGGGAGAGCCGGTCAACGAGGCAGACGCC
hu. 64-B	141	TCCTGGGTACAAGTACCTTGGACCCCTTCAACGGACTCGACAAGGGAGAGCCGGTCAACGAGGCAGACGCC
hu. 27-B	141	TCCTGGGTACAAGTACCTCGGACCCCTTCAACGGACTCGACAAGGGAGAGCCGGTCAACGAGGCAGACGCC
hu. 21-B	141	TCCTGGGTACAAGTACCTCGGACCCCTTCAACGGACTCGACAAGGGAGAGCCGGTCAACGAGGCAGACGCC
hu. 22-B	141	TCCTGGGTACAAGTACCTCGGACCCCTTCAACGGACTCGACAAGGGAGAGCCGGTCAACGAGGCAGACGCC
hu. 23-B	141	TCCTGGGTACAAGTACCTCGGACCCCTTCAACGGACTCGACAAGGGAGAGCCGGTCAACGAGGCAGACGCC
hu. 7-C	141	TCCTGGGTACAAGTACCTCGGACCCCTTCAACGGACTCGACAAGGGAGAGCCGGTCAACGAGGCAGACGCC
hu. 61-C	141	TCCTGGGTACAAGTACCTCGGACCCCTTCAACGGACTCGACAAGGGAGAGCCGGTCAACGAGGCAGACGCC
rh. 56-C	141	TCCTGGGTACAAGTACCTCGGACCCCTTCAACGGACTCGACAAGGGAGAGCCGGTCAACGAGGCAGACGCC
hu. 9-C	141	TCCTGGGTACAAGTACCTCGGACCCCTTCAACGGACTCGACAAGGGAGAGCCGGTCAACGAGGCAGACGCC
hu. 54-C	141	TCCTGGGTACAAGTACCTCGGACCCCTTCAACGGACTCGACAAGGGAGAGCCGGTCAACGAGGCAGACGCC
hu. 53-C	141	TCCTGGGTACAAGTACCTCGGACCCCTTCAACGGACTCGACAAGGGAGAGCCGGTCAACGAGGCAGACGCC
hu. 60-C	141	TCCTGGGTACAAGTACCTCGGACCCCTTCAACGGACTCGACAAGGGAGAGCCGGTCAACGAGGCAGACGCC
hu. 55-C	141	TCCTGGGTACAAGTACCTCGGACCCCTTCAACGGACTCGACAAGGGAGAGCCGGTCAACGAGGCAGACGCC
hu. 2-C	141	TCCTGGGTACAAGTACCTCGGACCCCTTCAACGGACTCGACAAGGGAGAGCCGGTCAACGAGGCAGACGCC
hu. 1-C	141	TCCTGGGTACAAGTACCTCGGACCCCTTCAACGGACTCGACAAGGGAGAGCCGGTCAACGAGGCAGACGCC

FIG. 3G

hu. 18-C	141	TCCTGGGTACAAGTACCTCGGACCCCTTCAACGGACTCGACAAGGGAGAGCCGGTCAACGAGGCAGACGCC
hu. 3-C	141	TCCTGGGTACAAGTACCTCGGACCCCTTCAACGGACTCGACAAGGGAGAGCCGGTCAACGAGGCAGACGCC
hu. 25-C	141	TCCTGGGTACAAGTACCTCGGACCCCTTCAACGGACTCGACAAGGGAGAGCCGGTCAACGAGGCAGACGCC
hu. 15-C	141	TCCTGGGTACAAGTACCTCGGACCCCTTCAACGGACTCGACAAGGGAGAGCCGGTCAACGAGGCAGACGCC
hu. 16-C	141	TCCTGGGTACAAGTACCTCGGACCCCTTCAACGGACTCGACAAGGGAGAGCCGGTCAACGAGGCAGACGCC
hu. 11-C	141	TCCTGGGTACAAGTACCTCGGACCCCTTCAACGGACTCGACAAGGGAGAGCCGGTCAACGAGGCAGACGCC
hu. 10-C	141	TCCTGGGTACAAGTACCTCGGACCCCTTCAACGGACTCGACAAGGGAGAGCCGGTCAACGAGGCAGACGCC
hu. 4-C	141	TCCTGGGTACAAGTACCTCGGACCCCTTCAACGGACTCGACAAGGGAGAGCCGGTCAACGAGGCAGACGCC
rh. 54-D	141	TCCTGGCTACAAGTACCTCGGACCCCTTCAACGGACTCGACAAGGGAGAGCCCGTCAACGCGCGGACGCA
rh. 48-D	141	TCCTGGCTACAAGTACCTCGGACCCCTTCAACGGACTCGACAAGGGAGAGCCCGTCAACGCGCGGACGCA
rh. 55-D	141	TCCTGGCTACAAGTACCTCGGACCCCTTCAACGGACTCGACAAGGGAGAGCCCGTCAACGCGCGGACGCA
rh. 62-D	141	TCCTGGCTACAAGTACCTCGGACCCCTTCAACGGACTCGACAAGGGAGAGCCCGTCAACGCGCGGACGCA
AAV7-D	141	TCCTGGCTACAAGTACCTCGGACCCCTTCAACGGACTCGACAAGGGAGAGCCCGTCAACGCGCGGACGCA
rh. 52-E	141	TCCTGGCTACAAGTACCTCGGACCCCTTCAACGGACTCGACAAGGGAGAGCCCGTCAACGCGCGGACGCA
rh. 51-E	141	TCCTGGCTACAAGTACCTCGGACCCCTTCAACGGACTCGACAAGGGAGAGCCCGTCAACGCGCGGACGCA
hu. 39-E	141	TCCTGGCTACAAGTACCTCGGACCCCTTCAACGGACTCGACAAGGGAGAGCCCGTCAACGCGCGGACGCA
rh. 53-E	141	TCCTGGCTACAAGTACCTCGGACCCCTTCAACGGACTCGACAAGGGAGAGCCCGTCAACGCGCGGACGCA
hu. 37-E	141	TCCTGGCTACAAGTACCTCGGACCCCTTCAACGGACTCGACAAGGGAGAGCCCGTCAACGCGCGGACGCA
rh. 43-E	141	TCCTGGCTACAAGTACCTCGGACCCCTTCAACGGACTCGACAAGGGAGAGCCCGTCAACGCGCGGACGCA
rh. 50-E	141	TCCTGGCTACAAGTACCTCGGACCCCTTCAACGGACTCGACAAGGGAGAGCCCGTCAACGCGCGGACGCA
rh. 49-E	141	TCCTGGCTACAAGTACCTCGGACCCCTTCAACGGACTCGACAAGGGAGAGCCCGTCAACGCGCGGACGCA
rh. 61-E	141	TCCTGGCTACAAGTACCTCGGACCCCTTCAACGGACTCGACAAGGGAGAGCCCGTCAACGCGCGGACGCA
hu. 41-E	141	TCCTGGCTACAAGTACCTCGGACCCCTTCAACGGACTCGACAAGGGAGAGCCCGTCAACGCGCGGACGCA
rh. 64-E	141	TCCTGGCTACAAGTACCTCGGACCCCTTCAACGGACTCGACAAGGGAGAGCCCGTCAACGCGCGGACGCA
hu. 42-E	141	TCCTGGCTACAAGTACCTCGGACCCCTTCAACGGACTCGACAAGGGAGAGCCCGTCAACGCGCGGACGCA
rh. 57-E	141	TCCTGGCTACAAGTACCTCGGACCCCTTCAACGGACTCGACAAGGGAGAGCCCGTCAACGCGCGGACGCA
hu. 40-E	141	TCCTGGCTACAAGTACCTCGGACCCCTTCAACGGACTCGACAAGGGAGAGCCCGTCAACGCGCGGACGCA
AAV8-E	141	TCCTGGCTACAAGTACCTCGGACCCCTTCAACGGACTCGACAAGGGAGAGCCCGTCAACGCGCGGACGCA
rh. 58-E	141	TCCTGGCTACAAGTACCTCGGACCCCTTCAACGGACTCGACAAGGGAGAGCCCGTCAACGCGCGGACGCA
rh. 40-E	141	TCCTGGCTACAAGTACCTCGGACCCCTTCAACGGACTCGACAAGGGAGAGCCCGTCAACGCGCGGACGCA

FIG. 3H

hu. 67-E	141	TCCTGGCTACAAGTACCTCGGACCCCTTCAACGGACTCGACAAAGGGGAGCCCGTCAATGCGGCGGACGCA	220	230	240	250	260	270	280
hu. 17-E	141	TCCTGGCTGCAAGTACCTCGGACCCCTTCAACGGACTCGACAAAGGGGAGCCCGTCAACGCGGCGGACGCA	.... .... .... .... .... .... .... .... .... ....						
hu. 6-E	141	TCCTGGCTACAAGTACCTCGGACCCCTTCAACGGACTCGACAAAGGGGAGCCCGTCAACGCGGCGGACGCA							
hu. 66-E	141	TCCTGGCTACAAGTACCTCGGACCCCTTCAACGGACTCGACAAAGGGGAGCCCGTCAACGCGGCGGACGCA							
rh. 38-E	141	TCCTGGCTACAAGTACCTCGGACCCCTTCAACGGACTCGACAAAGGGGAGCCCGTCAACGCGGCGGACGCA							
hu. 32-F	141	TCCTGGGTACAAGTACCTCGGACCCCGCAACGGACTCGACAAAGGGGAGCCCGTCAACGCGAGCAGACGCG							
AAV9/hu	141	TCCGGGTTACAATACCTTGGACCCCGCAACGGACTCGACAAAGGGGAGCCCGTCAACGCGAGCAGACGCG							
hu. 31-F	141	TCCTGGGTACAAGTACCTCGGACCCCGCAACGGACTCGACAAAGGGGAGCCCGTCAACGCGAGCAGACGCG							
AAV5	208	GTGCGCGAGAGCACGACATCTCGTACAAACGAGCAGCTTGAGGCGGGAGACAACCCCTACCTCAAGTACA							
AAV3-3	211	GCAGCCCTCGAACACGACAAAAGCTTACGACCAGCAGCTCAAGGCCGGTGACAACCCGTACCTCAAGTACA							
AAV4-4	208	GCAGCCCTCGAGCACGACAAAGGCTTACGACCAGCAGCTCAAGGCCGGTGACAACCCCTACCTCAAGTACA							
AAV1-A	211	GCGGCCCTCGAGCACGACAAAGGCTTACGACCAGCAGCTCAAGGCCGGTGACAATCCGTACCTGCGGTATA							
hu. 46-A	211	GCGGCCCTCGAGCACGACAAAAGCTTACGACCAGCAGCTCGACAGCGGAGACAACCCGTACCTCAAGTACA							
hu. 48-A	211	GCGGCCCTCGAGCACGACAAAGGCTTACGACCAGCAGCTCAAGGCCGGTGACAATCCGTACCTGCGGTATA							
hu. 44-A	211	GCGGCCCTCGAGCACGACAAAAGCTTACGACCAGCAGCTCGACAGCGGAGACAACCCGTACCTCAAGTACA							
hu. 43-A	211	GCGGCCCTCGAGCACGACAAAGGCTTACGACCAGCAGCTCAAGGCCGGTGACAATCCGTACCCCGGTATA							
AAV6-A	211	GCGGCCCTCGAGCACGACAAAGGCTTACGACCAGCAGCTCAAGGCCGGTGACAATCCGTACCTGCGGTATA							
hu. 34-B	211	GCGGCCCTCGAGCACGACAAAAGCTTACGACCAGCAGCTCGACAGCGGAGACAACCCGTACCTCAAGTACA							
hu. 47-B	211	GCGGCCCTCGAGCACGACAAAAGCTTACGACCAGCAGCTCGACAGCGGAGACAACCCGTACCTCAAGTACA							
hu. 29-B	211	GCGGCCCTCGAGCACGACAAAGGCTTACGACCAGCAGCTCGACAGCGGAGACAACCCGTACCTCAAGTACA							
hu. 63-B	211	GCGGCCCTCGAGCACGACAAAGGCTTACGACCAGCAGCTCGACAGCGGAGACAACCCGTACCCCAAGTACA							
hu. 56-B	211	GCGGCCCTCGAGCACGACAAAGGCTTACGACCAGCAGCTCGACAGCGGAGACAACCCGTACCTCAAGTACA							
hu. 45-B	211	GCGGCCCTCGAGCACGACAAAAGCTTACGACCAGCAGCTCGACAGCGGAGACAACCCGTACCTCAAGTACA							
hu. 57-B	208	GCGGCCCTCGAGCACGACAAAGGCTTACGACCAGCAGCTCGACAGCGGAGACAACCCGTACCTCAAGTACA							
hu. 35-B	211	GCGGCCCTCGAGCACGACAAAAGCTTACGACCAGCAGCTCGACAGCGGAGACAACCCGTACCTCAAGTACA							
hu. 58-B	211	GCGGCCCTCGAGCACGACAAAGGCTTACGACCAGCAGCTCGACAGCGGAGACAACCCGTACCTCAAGTACG							
hu. 28-B	211	GCGGCCCTCGAGCACGACAAAGGCTTACGACCAGCAGCTCGACAGCGGAGACAACCCGTACCTCAAGTACA							

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hu.51-B 211 GCGGCCCTCGAGCACGACAAAGCCTACGACCGGCAGCTCGACAGCGGAGACAACCCGTACCTCAAAGTACA  
 hu.19-B 211 GCGGCCCTCGAGCACGACAAAGCCTACGACCGGCAGCTCGACAGCGGAGACAACCCGTACCTCAAAGTACA  
 hu.49-B 211 GCGGCCCTCGAGTACGACAAAGCCTACGACCGGCAGCTCGACAGCGGAGACAACCCGTACCTCAAAGTACA  
 hu.52-B 211 GCGGCCCTCGAGCACGACAAAGCCTACGACCGGCAGCTCGACAGCGGAGACAACCCGTACCTCAAAGTACA  
 hu.13-B 211 GCGGCCCTCGAGCACGACAAAGCCTACGACCGGCAGCTCGACAGCGGAGACAACCCGTACCTCAAAGTACA  
 AAV2-B 211 GCGGCCCTCGAGCACGACAAAGCCTACGACCGGCAGCTCGACAGCGGAGACAACCCGTACCTCAAAGTACA  
 hu.20-B 211 GCGGCCCTCGAGCACGACAAAGCCTACGACCGGCAGCTCGACAGCGGAGACAACCCGTACCTCAAAGTACA  
 hu.24-B 211 GCGGCCCTCGAGCACGACAAAGCCTACGACCGGCAGCTCGACAGCGGAGATAACCCGTACCTCAAAGTACA  
 hu.64-B 211 GCGGCCCTCGAGCACGACAAAGCCTACGACCGGCAGCTCGACGGGAGACAACCCGTACCTCAAAGTACA  
 hu.27-B 211 GCGGCCCTCGAGCACGACAAAGCCTACGACCGGCAGCTCGACAGCGGAGACAACCCGTACCTCAAAGTACA  
 hu.21-B 211 GCGGCCCTCGAGCACGACAAAGCCTACGACCGGCAGCTCGACAGCGGAGATAACCCGTACCTCAAAGTACA  
 hu.22-B 211 GCGGCCCTCGAGCACGACAAAGCCTACGACCGGCAGCTCGACAGCGGAGACAACCCGTACCTCAAAGTACA  
 hu.23-B 211 GCGGCCCTCGAGCACGACAAAGCCTACGACCGGCAGCTCGACAGCGGAGACAACCCGTACCTCAAAGTACA  
 hu.7-C 211 GCGGCCCTCGAGCACGACAAAGCCTACGACCGGCAGCTCGACAGCGGAGACAACCCGTACCTCAAAGTACA  
 hu.61-C 211 GCGGCCCTCGAGCACGACAAAGCCTACGACCGGCAGCTCGACAGCGGAGACAACCCGTACCTCAAAGTACA  
 rh.56-C 211 GCGGCCCTCGAGCACGACAAAGCCTACGACCGGCAGCTCGACAGCGGAGACAACCCGTACCTCAAAGTACA  
 hu.9-C 211 GCGGCCCTCGAGCACGACAAAGCCTACGACCGGCAGCTCGACAGCGGAGACAACCCGTACCTCAAAGTACA  
 hu.54-C 211 GCGGCTCTCGAGCACGACAAAGCCTACGACCGGCAGCTCGACAGCGGAGACAACCCGTACCTCAAAGTACA  
 hu.53-C 211 GCGGCCCTCGAGCACGACAAAGCCTACGACCGGCAGCTCGACAGCGGAGACAACCCGTACCTCAAAGTACA  
 hu.60-C 211 GCGGCCCTCGAGCACGACAAAGCCTACGACCGGCAGCTCGACAGCGGAGACAACCCGTACCTCAAAGTACA  
 hu.55-C 211 GCGGCCCTCGAGCACGACAAAGCCTACGACCGGCAGCTCGACAGCGGAGACAACCCGTACCTCAAAGTACA  
 hu.2-C 211 GCGGCCCTCGAGCACGACAAAGCCTACGACCGGCAGCTCGACAGCGGAGACAACCCGTACCTCAAAGTACA  
 hu.1-C 211 GCGGCCCTCGAGCACGACAAAGCCTACGACCGGCAGCTCGACAGCGGAGACAACCCGTACCTCAAAGTACA  
 hu.18-C 211 GCGGCCCTCGAGCACGACAAAGCCTACGACCGGCAGCTCGAAAGCGGAGACAACCCGTACCTCAAAGTACA  
 hu.3-C 211 GCGGCCCTCGAGCACGACAAAGCCTACGACCGGCAGCTCGACAGCGGAGACAACCCGTACCTCAAAGTACA  
 hu.25-C 211 GCGGCCCTCGAGCACGACAAAGCCTACGACCGGCAGCTCAACAGCGGAGACAACCCGTACCTCAAAGTACA  
 hu.15-C 211 GCGGCCCTCGAGCACGACAAAGCCTACGACCGGCAGCTCGACAGCGGAGACAACCCGTACCTCAAAGTACA  
 hu.16-C 211 GCGGCCCTCGAGCACGACAAAGCCTACGACCGGCAGCTCGACAGCGGAGACAACCCGTACCTCAAAGTACA  
 hu.11-C 211 GCGGCCCTCGAGCACGACAAAGCCTACGACCGGCAGCTCGACAGCGGAGACAACCCGTACCTCAAAGTACA  
 hu.10-C 211 GCGGCCCTCGAGCACGACAAAGCCTACGACCGGCAGCTCGACAGCGGAGACAACCCGTACCTCAAAGTACA

FIG. 3J

hu. 4-C	211	GCGGCCCTCGAGCACGACAAGGCGCTACGACCGGCAGCTCGACAGCGGAGACAACCCGTACCTCAAGTACA
rh. 54-D	211	GCGGCCCTCGAGCACGACAAGGCGCTACGACCGGCAGCTCAAAGCGGGTGACAAATCCGTACCTGCGGTATA
rh. 48-D	211	GCGGCCCTCGAGCACGACAAGGCGCTACGACCGGCAGCTCAAAGCGGGTGACAAATCCGTACCTGCGGTATA
rh. 55-D	211	GCGGCCCTCGAGCACGACAAGGCGCTACGACCGGCAGCTCAAAGCGGGTGACAAATCCGTACCTGCGGTATA
rh. 62-D	211	GCGGCCCTCGAGCACGACAAGGCGCTACGACCGGCAGCTCAAAGCGGGTGACAAATCCGTACCTGCGGTATA
AAV7-D	211	GCGGCCCTCGAGCACGACAAGGCGCTACGACCGGCAGCTCAAAGCGGGTGACAAATCCGTACCTGCGGTATA
rh. 52-E	211	GCGGCCCTCGAGCACGACAAGGCGCTACGACCGGCAGCTCAAAGCGGGTGACAAATCCGTACCTGCGGTATA
rh. 51-E	211	GCGGCCCTCGAGCACGACAAGGCGCTACGACCGGCAGCTCAAAGCGGGTGACAAATCCGTACCTGCGGTATA
hu. 39-E	211	GCGGCCCTCGAGCACGACAAGGCGCTACGACCGGCAGCTCAAAGCGGGTGACAAATCCGTACCTGCGGTATA
rh. 53-E	211	GCGGCCCTCGAGCACGACAAGGCGCTACGACCGGCAGCTCAAAGCGGGTGACAAATCCGTACCTGCGGTATA
hu. 37-E	211	GCGGCCCTCGAGCACGACAAGGCGCTACGACCGGCAGCTCAAAGCGGGTGACAAATCCGTACCTGCGGTATA
rh. 43-E	211	GCGGCCCTCGAGCACGACAAGGCGCTACGACCGGCAGCTCAAAGCGGGTGACAAATCCGTACCTGCGGTATA
rh. 50-E	211	GCGGCCCTCGAGCACGACAAGGCGCTACGACCGGCAGCTCAAAGCGGGTGACAAATCCGTACCTGCGGTATA
rh. 49-E	211	GCGGCCCTCGAGCACGACAAGGCGCTACGACCGGCAGCTCAAAGCGGGTGACAAATCCGTACCTGCGGTATA
rh. 61-E	211	GCGGCCCTCGAGCACGACAAGGCGCTACGACCGGCAGCTCAAAGCGGGTGACAAATCCGTACCTGCGGTATA
hu. 41-E	211	GCGGCCCTCGAGCACGACAAGGCGCTACGACCGGCAGCTCAAAGCGGGTGACAAATCCGTACCTGCGGTATA
rh. 64-E	211	GCGGCCCTCGAGCACGACAAGGCGCTACGACCGGCAGCTCAAAGCGGGTGACAAATCCGTACCTGCGGTATA
hu. 42-E	211	GCGGCCCTCGAGCACGACAAGGCGCTACGACCGGCAGCTCAAAGCGGGTGACAAATCCGTACCTGCGGTATA
rh. 57-E	211	GCGGCCCTCGAGCACGACAAGGCGCTACGACCGGCAGCTCAAAGCGGGTGACAAATCCGTACCTGCGGTATA
hu. 40-E	211	GCGGCCCTCGAGCACGACAAGGCGCTACGACCGGCAGCTCAAAGCGGGTGACAAATCCGTACCTGCGGTATA
AAV8-E	211	GCGGCCCTCGAGCACGACAAGGCGCTACGACCGGCAGCTCAAAGCGGGTGACAAATCCGTACCTGCGGTATA
rh. 58-E	211	GCGGCCCTCGAGCACGACAAGGCGCTACGACCGGCAGCTCAAAGCGGGTGACAAATCCGTACCTGCGGTATA
rh. 40-E	211	GCGGCCCTCGAGCACGACAAGGCGCTACGACCGGCAGCTCAAAGCGGGTGACAAATCCGTACCTGCGGTATA
hu. 67-E	211	GCGGCCCTCGAGCACGACAAGGCGCTACGACCGGCAGCTCAAAGCGGGTGACAAATCCGTACCTGCGGTATA
hu. 17-E	211	GCGGCCCTCGAGCACGACAAGGCGCTACGACCGGCAGCTCAAAGCGGGTGACAAATCCGTACCTGCGGTATA
hu. 6-E	211	GCGGCCCTCGAGCACGACAAGGCGCTACGACCGGCAGCTCAAAGCGGGTGACAAATCCGTACCTGCGGTATA
hu. 66-E	211	GCGGCCCTCGAGCACGACAAGGCGCTACGACCGGCAGCTCAAAGCGGGTGACAAATCCGTACCTGCGGTATA
rh. 38-E	211	GCGGCCCTCGAGCACGACAAGGCGCTACGACCGGCAGCTCAAAGCGGGTGACAAATCCGTACCTGCGGTATA
hu. 32-F	211	GCGGCCCTCGAGCACGACAAGGCGCTACGACCGGCAGCTCAAAGCGGGTGACAAATCCGTACCTCAAGTACA
AAV9/hu	211	GCGGCCCTCGAGCACGACAAGGCGCTACGACCGGCAGCTCAAAGCGGGTGACAAATCCGTACCTCAAGTACA

FIG. 3K



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hu.31-F	211	GCGGCCCTCGAGC	ACGACAAGGCCTACGACCAGCAGCTCAAGGCCGGAGACAACCCGTACCTCAAGTACA
AAV5	278	.... .... .... .... .... .... .... .... .... .... .... .... .... .... ....	ACCACGCCGACGCCGAGTTTCAGGAGAAGCTCGCCGACGACATCCTTCGGGGGAACCTCGGAAAAGGC
AAV3-3	281	ACCACGCCGACGCCGAGTTTCAGGAGCGTCTTCAAGAAGATACTGCTTTTTGGGGCAACCTTGGCAGAGC	
AAV4-4	278	ACCACGCCGACGCCGAGTTTCAGCAGCGGCTTCAGGGCGACATCGTTTTGGGGCAACCTCGGCAGAGC	
AAV1-A	281	ACCACGCCGACGCCGAGTTTCAGGAGCGTCTGCAAGAAGATACGTCTTTTGGGGCAACCTCGGGCGAGC	
hu.46-A	281	ACCACGCCGACGCCGAGTTTCAGGAGCGCTTAAGAAGATACGTCTTTTGGGGCAACCTCGGGCGGGC	
hu.48-A	281	ACCACGCCGACGCCGAGTTTCAGGAGCGTCTGCAAGAAGATACGTCTTTTGGGGCAACCTCGGGCGAGC	
hu.44-A	281	ACCACGCCGACGCCGAGTTTCAGGAGCGCTTAAGAAGATACGTCTTTTGGGGCAACCTCGGGCGAGC	
hu.43-A	281	ACCACGCCGACGCCGAGTTTCAGGAGCGTCTGCAAGAAGATACGCCTTTTTGGGGCAACCTCGGGCGAGC	
AAV6-A	281	ACCACGCCGACGCCGAGTTTCAGGAGCGTCTGCAAGAAGATACGTCTTTTGGGGCAACCTCGGGCGAGC	
hu.34-B	281	ACCACGCCGACGCCGAGTTTCAGGAGCGCTTAAGAAGATACGTCTTTTGGGGCAACCTCGGACGAGC	
hu.47-B	281	ACCACGCCGACGCCGAGTTTCAGGAGCGCTTAAGAAGATACGTCTTTTGGGGCAACCTCGGACGAGC	
hu.29-B	281	ACCACGCCGACGCAGAGTTTCAGGAGCGCTTAAGAAGATACGTCTTTTGGGGCAACCTCGGACGAGC	
hu.63-B	281	ACCACGCCGACGCCGAGTTCCAGGAGCGTCTTAAGAAGATACGTCTTTTGGGGCAACCTCGGACGAGC	
hu.56-B	281	ACCACGCCGACGCCGAGTTTCAGGAGCGCTTAAGAAGATACGTCTTTTGGGGCAACCTCGGACGAGC	
hu.45-B	281	ACCACGCCGACGCCGAGTTTCAGGAGCGCTTAAGAAGATACGTCTTTTGGGGCAACCTCGGACGAGC	
hu.57-B	278	ACCACGCCGACGCCGAGTTTCAGGAGCGCTTAAGAAGATACGTCTTTTGGGGCAACCTCGGACGAGC	
hu.35-B	281	ACCACGCCGACGCCGAGTTTCAGGAGCGCTTAAGAAGATACGTCTTTTGGGGCAACCTCGGACGAGC	
hu.58-B	281	ACCACGCCGACGCCGAGTTTCAGGAGCGCTTAAGAAGATACGTCTTTTGGGGCAACCTCGGACGAGC	
hu.28-B	281	ACCACGCCGACGCCGAGTTTCAGGAGCGCTTAAGAAGATACGTCTTTTGGGGCAACCTCGGACGAGC	
hu.51-B	281	ACCACGCCGACGCCGAGTTTCAGGAGCGCTTAAGAAGATACGTCTTTTGGGGCAACCTCGGACGAGC	
hu.19-B	281	ACCACGCCGACGCCGAGTTTCAGGAGCGTCTTAAGAAGATACGTCTTTTGGGGCAACCTCGGACGAGC	
hu.49-B	281	ACCACGCCGACGCCGAGTTTCAGGAGCGCTTAAGAAGATACGTCTTTTGGGGCAACCTCGGACGAGC	
hu.52-B	281	ACCACGCCGACGCCGAGTTTCAGGAGCGCTTAAGAAGATACGTCTTTTGGGGCAACCTCGGACGAGC	
hu.13-B	281	ACCACGCCGACGCCGAGTTTCAGGAGCGCTTAAGAAGATACGTCTTTTGGGGCAACCTCGGACGAGC	
AAV2-B	281	ACCACGCCGACGCCGAGTTTCAGGAGCGCTTAAGAAGATACGTCTTTTGGGGCAACCTCGGACGAGC	
hu.20-B	281	ACCACGTCGACGCCGAGTTTCAGGAGCGTCTTAAGAAGATACGTCTTTTGGGGCAACCTCGGACGAGC	

FIG. 3L



hu. 24-B	281	ACCACGCCGACGCGGAGTTTCAGGAGCGCCCTTAAAGAGGATACGTCCTTTTGGGGGCAACCTCGGACGAGC
hu. 64-B	281	ACCACGCCGACGCGGAGTTCCAGGAGCGTCTTAAAGAAGATACGTCCTTTTGGGGGCAACCTCGGACGAGC
hu. 27-B	281	ACCACGCCGACGCGGAGTTTCAGGAGCGTCTTAAAGAAGATACGTCCTTTTGGGGGCAACCTCGGACGAGC
hu. 21-B	281	ACCACGCCGACGCGGAGTTTCAGGAGCGCTTAAAGGAGATACGTCCTTTTGGGGGCAACCTCGGACGAGC
hu. 22-B	281	ACCACGCCGACGCGGAGTTTCAGGAGCGTCTTAAAGAAGATACGTCCTTTTGGGGGCAACCTCGGACGAGC
hu. 23-B	281	ACCACGCCGACGCGGAGTTTCAGGAGCGTCTTAAAGAAGATACGTCCTTTTGGGGGCAACCTCGGACGAGC
hu. 7-C	281	ACCACGCCGACGCGGAGTTTCAGGAGCGCTTAAAGAAGATACGTCCTTTTGGGGGCAACCTCGGACGAGC
hu. 61-C	281	ACCACGCCGACGCGGAGTTTCAGGAGCGCTTAAAGAAGATACGTCCTTTTGGGGGCAACCTCGGACGAGC
rh. 56-C	281	ACCACGCCGACGCGGAGTTTCAGGAGCGTCTTAAAGAAGATACGTCCTTTTGGGGGCAACCTCGGACGAGC
hu. 9-C	281	ACCACGCCGACGCGGAGTTTCAGGAGCGTCTTAAAGAAGATACGTCCTTTTGGGGGCAACCTCGGACGAGC
hu. 54-C	281	ACCACGCCGACGCGGAGTTTCAGGAGCGTCTTAAAGAAGATACGTCCTTTTGGGGGCAACCTCGGACGAGC
hu. 53-C	281	ACCACGCCGACGCGGAGTTTCAGGAGCGCTTAAAGAAGATACGTCCTTTTGGGGGCAACCTCGGACGAGC
hu. 60-C	281	ACCACGCCGACGCGGAGTTTCAGGAGCGTCTTAAAGAAGATACGTCCTTTTGGGGGCAACCTCGGACGAGC
hu. 55-C	281	ACCACGCCGACGCGGAGTTTCAGGAGCGCTTAAAGAAGATACGTCCTTTTGGGGGCAACCTCGGACGAGC
hu. 2-C	281	ACCACGCCGACGCGGAGTTTCAGGAGCGCTTAAAGAAGATACGTCCTTTTGGGGGCAACCTCGGACGAGC
hu. 1-C	281	ACCACGCCGACGCGGAGTTTCAGGAGCGTCTTAAAGAAGATACGTCCTTTTGGGGGCAACCTCGGACGAGC
hu. 18-C	281	ACCACGCCGACGCGGAGTTTCAGGAGCGCTTAAAGAAGATACGTCCTTTTGGGGGCAACCTCGGACGAGC
hu. 3-C	281	ACCACGCCGACGCGGAGTTTCAGGAGCGCTTAAAGAAGATACGTCCTTTTGGGGGCAACCTCGGACGAGC
hu. 25-C	281	ACCACGCCGACGCGGAGTTTCAGGAGCGCTTAAAGAAGATACGTCCTTTTGGGGGCAACCTCGGACGAGC
hu. 15-C	281	ACCACGCCGACGCGGAGTTTCAGGAGCGCTTAAAGAAGATACGTCCTTTTGGGGGCAACCTCGGACGAGC
hu. 16-C	281	ACCACGCCGACGCGGAGTTTCAGGAGCGCTTAAAGAAGATACGTCCTTTTGGGGGCAACCTCGGACGAGC
hu. 11-C	281	ACCACGCCGACGCGGAGTTTCAGGAGCGCTTAAAGAAGATACGTCCTTTTGGGGGCAACCTCGGACGAGC
hu. 10-C	281	ACCACGCCGACGCGGAGTTTCAGGAGCGCTTAAAGAAGATACGTCCTTTTGGGGGCAACCTCGGACGAGC
hu. 4-C	281	ACCACGCCGACGCGGAGTTTCAGGAGCGCTTAAAGAAGATACGTCCTTTTGGGGGCAACCTCGGACGAGC
rh. 54-D	281	ACCACGCCGACGCGGAGTTTCAGGAGCGCTTAAAGAAGATACGTCCTTTTGGGGGCAACCTCGGACGAGC
rh. 48-D	281	ACCACGCCGACGCGGAGTTTCAGGAGCGCTTAAAGAAGATACGTCCTTTTGGGGGCAACCTCGGACGAGC
rh. 55-D	281	ATCACGCCGACGCGGAGTTTCAGGAGCGCTTAAAGAAGATACGTCCTTTTGGGGGCAACCTCGGACGAGC
rh. 62-D	281	ACCACGCCGACGCGGAGTTTCAGGAGCGCTTAAAGAAGATACGTCCTTTTGGGGGCAACCTCGGACGAGC
AAV7-D	281	ACCACGCCGACGCGGAGTTTCAGGAGCGCTTAAAGAAGATACGTCCTTTTGGGGGCAACCTCGGACGAGC
rh. 52-E	281	ATCACGCCGACGCGGAGTTTCAGGAGCGCTTAAAGAAGATACGTCCTTTTGGGGGCAACCTCGGACGAGC

FIG. 3M

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rh. 51-E	281	ATCAGCCGACGCCGAGCTTCAGGAGCGTCTGCAAGAAGATACGTCTTTGGGGCAACCTCGGGCGAGC	360	370	380	390	400	410	420
hu. 39-E	281	ATCAGCCGACGCCGAGTTTCAGGAGCGTCTGCAAGAAGATACGTCTTTGGGGCAACCTCGGGCGAGC							
rh. 53-E	281	ATCAGCCGACGCCGAGTTTCAGGAGCGTCTGCAAGAAGATACGTCTTTGGGGCAACCTCGGGCGAGC							
hu. 37-E	281	ACCAGCCGACGCCGAGTTTCAGGAGCGTCTGCAAGAAGATACGTCTTTGGGGCAACCTCGGGCGAGC							
rh. 43-E	281	ACCAGCCGACGCCGAGTTTCAGGAGCGTCTGCAAGAAGATACGTCTTTGGGGCAACCTCGGGCGAGC							
rh. 50-E	281	ATCAGCCGACGCCGAGTTTCAGGAGCGTCTGCAAGAAGATACGTCTTTGGGGCAACCTCGGGCGAGC							
rh. 49-E	281	ATCAGCCGACGCCGAGTTTCAGGAGCGTCTGCAAGAAGATACGTCTTTGGGGCAACCTCGGGCGAGC							
rh. 61-E	281	ATCAGCCGACGCCGAGTTTCAGGAGCGTCTGCAAGAAGATACGTCTTTGGGGCAACCTCGGGCGAGC							
hu. 41-E	281	ACCAGCCGACGCCGAGTTTCAGGAGCGTCTGCAAGAAGATACGTCTTTGGGGCAACCTCGGGCGAGC							
rh. 64-E	281	ATCAGCCGACGCCGAGTTTCAGGAGCGTCTGCAAGAAGATACGTCTTTGGGGCAACCTCGGGCGAGC							
hu. 42-E	281	ACCAGCCGACGCCGAGTTTCAGGAGCGTCTGCAAGAAGATACGTCTTTGGGGCAACCTCGGGCGAGC							
rh. 57-E	281	ATCAGCCGACGCCGAGTTTCAGGAGCGTCTGCAAGAAGATACGTCTTTGGGGCAACCTCGGGCGAGC							
hu. 40-E	281	ACCAGCCGACGCCGAGTTTCAGGAGCGTCTGCAAGAAGATACGTCTTTGGGGCAACCTCGGGCGAGC							
AAV8-E	281	ACCAGCCGACGCCGAGTTTCAGGAGCGTCTGCAAGAAGATACGTCTTTGGGGCAACCTCGGGCGAGC							
rh. 58-E	281	ATCAGCCGACGCCGAGTTTCAGGAGCGTCTGCAAGAAGATACGTCTTTGGGGCAACCTCGGGCGAGC							
rh. 40-E	281	ACCAGCCGACGCCGAGTTTCAGGAGCGTCTGCAAGAAGATACGTCTTTGGGGCAACCTCGGGCGAGC							
hu. 67-E	281	ACCAGCCGACGCCGAGTTTCAGGAGCGTCTGCAAGAAGATACGTCTTTGGGGCAACCTCGGGCGAGC							
hu. 17-E	281	ACCAGCCGACGCCGAGTTTCAGGAGCGTCTGCAAGAAGATACGTCTTTGGGGCAACCTCGGGCGAGC							
hu. 6-E	281	ACCAGCCGACGCCGAGTTTCAGGAGCGTCTGCAAGAAGATACGTCTTTGGGGCAACCTCGGGCGAGC							
hu. 66-E	281	ACCAGCCGACGCCGAGTTTCAGGAGCGTCTGCAAGAAGATACGTCTTTGGGGCAACCTCGGGCGAGC							
rh. 38-E	281	ACCAGCCGACGCCGAGTTTCAGGAGCGTCTGCAAGAAGATACGTCTTTGGGGCAACCTCGGGCGAGC							
hu. 32-F	281	ACCAGCCGACGCCGAGTTTCAGGAGCGTCTGCAAGAAGATACGTCTTTGGGGCAACCTCGGGCGAGC							
AAV9/hu	281	ACCAGCCGACGCCGAGTTTCAGGAGCGTCTGCAAGAAGATACGTCTTTGGGGCAACCTCGGGCGAGC							
hu. 31-F	281	ACCAGCCGACGCCGAGTTTCAGGAGCGTCTGCAAGAAGATACGTCTTTGGGGCAACCTCGGGCGAGC							
AAV5	348	.... .... .... .... .... .... .... .... .... .... .... .... .... ....							
AAV3-3	351	AGTCTTTCAGGCCAAGAAAGGGTTCTCGAAACCTTTTGGC---CTGGTTGAAGAGGGTGCTAAGACGGCC							
AAV4-4	348	AGTCTTTCAGGCCAAGAAAGAGGATCCTTGAGCCTCTTGGT---CTGGTTGAGGAAGCAGCTAAAACGGCT							
	348	AGTCTTTCAGGCCAAGAAAGAGGGTTCTTGAAACCTCTTGGT---CTGGTTGAGCAAGCGGGTGAGACGGCT							

FIG. 3N

AAV1-A	351	AGTCTTCCAGGCCAAGAAGCGGGTTCTCGAACCTCTCGGT---	CTGGTTGAGGAAGGCGCTAAGACGGCT
hu.46-A	351	AGTCTTCCAGGCCAAGAAGCGGGTTCTCGAACCTCTCGGT---	CTGGTTGAGGAAGGCGCTAAGACGGCT
hu.48-A	351	AGTCTTCCAGGCCAAGAAGCGGGTTCTCGAACCTCTCGGT---	CTGGTTGAGGAAGGCGCTAAGACGGCT
hu.44-A	351	AGTCTTCCAGGCCAAGAAGCGGGTTCTCGAACCTCTCGGT---	CTGGTTGAGGAAGGCGCTAAGACGGCT
hu.43-A	351	AGTCTTCCAGGCCAAGAAGCGGGTTCTCGAACCTCTCGGT---	CTGGTTGAGGAAGCTGCTAAGACGGCT
AAV6-A	351	AGTCTTCCAGGCCAAGAAGAGGGTTCTCGAACCTTTTGGT---	CTGGTTGAGGAAGGCTAAGACGGCT
hu.34-B	351	AGTCTTCCAGGCCAAGAAGAGGGTACTTGAACCTCTGGGC---	CTGGTTGAGGAACCTGTTAAGACGGCT
hu.47-B	351	AGTCTTCCAGGCCAAGAAGAGGGTTCTTGAACCTCTGGGC---	CTGGTTGGGAACCTGTTAAGACGGCT
hu.29-B	351	AGTCTTCCAGGCCAAGAAGAGGGTTCTGGAACCTCTGGGC---	CTGGTTGAGGAGCCTGTTAAGACGGCT
hu.63-B	351	AGTCTTCCAGGCCAAGAAGAGGGTTCTTGAACCTCTGGGC---	CTGGTTGAGGAACCTGTTAAGACGGCT
hu.56-B	351	AGTCTTCCAGGCCAAGAAGAGGGTTCTTGAACCTCTGGGC---	CTGGTTGAGGAACCTGTTAAGACGGCT
hu.45-B	351	AGTCTTCCAGGCCAAGAAGAGGGTTCTTGAACCTCTGGGC---	CTGGTTGAGGAACCTGTTAAGACGGCT
hu.57-B	348	AGTCTTCCAGGCCAAGAAGAGGGTTCTTGAACCTCTGGGC---	CTGGTTGAGGAACCTGTTAAGACGGCT
hu.35-B	351	AGTCTTCCAGGCCAAGAAGAGGGTACTTGAACCTCTGGGC---	CTGGTTGAGGAACCTGTTAAGACGGCT
hu.58-B	351	AGTCTTCCAGGCCAAGAAGAGGGTTCTTGAACCTCTGGGC---	CTGGTTGAGGAGCCTGTTAAGACGGCT
hu.28-B	351	AGTCTTCCAGGCCAAGAAGAGGGTTCTGGAACCTCTGAGC---	CTGGTTGAGGAGCCTGTTAAGACGGCT
hu.51-B	351	AGTCTTCCAGGCCAAGAAGAGGGTTCTTGAACCTCTGGGC---	CTGGTTGGGAACCTGTTAAGACGGCT
hu.19-B	351	AGTCTTCCAGGCCAAGAAGAGGATTCTTGAACCTCTGGGC---	CTGGTTGAGGAACCTGTTAAGACGGCT
hu.49-B	351	AGTCTTCCAGGCCAAGAAGAGGGTTCTTGAACCTCTGGGC---	CTGGTTGAGGAACCTGTTAAGACGGCT
hu.52-B	351	AGTCTTCCAGGCCAAGAAGAGGGTTCTTGAACCTCTGGGC---	CTGGTTGGGAACCTGTTAAGACGGCT
hu.13-B	351	AGTCTTCCAGGCCAAGAAGAGGGTTCTTGAACCTCTGGGC---	CTGGTTGAGGAGCCTGTTAAACGGCT
AAV2-B	351	AGTCTTCCAGGCCAAGAAGAGGGTTCTTGAACCTCTGGGC---	CTGGTTGAGGAACCTGTTAAGACGGCT
hu.20-B	351	AGTCTTCCAGGCCAAGAAGAGGATTCTTGAACCTCTGGGC---	CTGGTTGAGGAACCTGTTAAGGCGGCT
hu.24-B	351	AGTCTTCCAGGCCAAGAAGAGGATTCTTGAACCTCTGGGC---	CTGGTTGAGGAACCTGTTAAGACGGCT
hu.64-B	351	AGTCTTCCAGGCCAAGAAGAGGGTTCTTGAACCTCTGGGC---	CTGGTTGAGGAACCTGTTAAGACGGCT
hu.27-B	351	AGTCTTCCAGGCCAAGAAGAGGATTCTTGAACCTCTGGGC---	CTGGTTGAGGAACCTGTTAAGACGGCT
hu.21-B	351	AGTCTTCCAGGCCAAGAAGAGGATTCTTGAACCTCTGGGC---	CTGGTTGAGGAACCTGTTAAGACGGCT
hu.22-B	351	AGTCTTCCAGGCCAAGAAGAGGATTCTTGAACCTCTGGGC---	CTGGTTGAGGAACCTGTTAAGACGGCT
hu.23-B	351	AGTCTTCCAGGCCAAGAAGAGGATTCTTGAACCTCTGGGC---	CTGGTTGAGGAACCTGTTAAGACGGCT
hu.7-C	351	AGTCTTCCAGGCCAAGAAGAGGGTTCTTGAACCTCTGGGC---	CTGGTTGAGGAGCCTGTTAAGACGGCT

FIG. 30

hu. 61-C	351	AGTCTTCCAGGCGAAAAAGAGGGTTCTTGAACCTCTGGGC---	CTGGTTGAGGAACCTGTTAAAAACGGCT
rh. 56-C	351	AGTCTTCCAGGCGAAAAAGAGGGTTCTTGAACCTCTGGGC---	CTGGTTGAGGAACCTGTTAAGACGGCT
hu. 9-C	351	AGTCTTCCAGGCGAAAAAGAGGGTTCTTGAACCTCTGGGC---	CTGGTTGAGGAACCTGTTAAGACGGCT
hu. 54-C	351	AGTCTTCCAGGCGAAAAAGAGGGTTCTTGAACCTCTGGGC---	CTGGTTGAGGAACCTGTTAAGACGGCT
hu. 53-C	351	AGTCTTCCAGGCGAAAAAGAGGGTTCTTGAACCTCTGGGC---	CTGGTTGAGGAACCTGTTAAGACGGCT
hu. 60-C	351	AGTCTTCCAGGCGAAAAAGAGGGTTCTTGAACCTCTGGGC---	CTGGTTGAGGAACCTGTTAAGACGGCT
hu. 55-C	351	AGTCTTCCAGGCGAAAAAGAGGGTTCTTGAACCTCTGGGC---	CTGGTTGAGGAACCTGTTAAGACGGCT
hu. 2-C	351	AGTCTTCCAGGCGAAAAAGAGGGTTCTTGAACCTCTGGGC---	CTGGTTGAGGAACCTGTTAAGACGGCT
hu. 1-C	351	AGTCTTCCAGGCGAAAAAGAGGGTTCTTGAACCTCTGGGC---	CTGGTTGAGGAACCTGTTAAGACGGCT
hu. 18-C	351	AGTCTTCCAGGCGAAAAAGAGGGTTCTTGAACCTCTGGGC---	CTGGTTGAGGAACCTGTTAAGACGGCT
hu. 3-C	351	AGTCTTCCAGGCGAAAAAGAGGGTTCTTGAACCTCTGGGC---	CTGGTTGAGGAACCTGTTAAGACGGCT
hu. 25-C	351	AGTCTTCCAGGCGAAAAAGAGGGTTCTTGAACCTCTGGGC---	CTGGTTGAGGAACCTGTTAAGACGGCT
hu. 15-C	351	AGTCTTCCAGGCGAAAAAGAGGGTTCTTGAACCTCTGGGC---	CTGGTTGAGGAACCTGTTAAGACGGCT
hu. 16-C	351	AGTCTTCCAGGCGAAAAAGAGGGTTCTTGAACCTCTGGGC---	CTGGTTGAGGAACCTGTTAAGACGGCT
hu. 11-C	351	AGTCTTCCAGGCGAAAAAGAGGGTTCTTGAACCTCTGGGC---	CTGGTTGAGGAACCTGTTAAGACGGCT
hu. 10-C	351	AGTCTTCCAGGCGAAAAAGAGGGTTCTTGAACCTCTGGGC---	CTGGTTGAGGAACCTGTTAAGACGGCT
hu. 4-C	351	AGTCTTCCAGGCGAAAAAGAGGGTTCTTGAACCTCTGGGC---	CTGGTTGAGGAACCTGTTAAGACGGCT
rh. 54-D	351	AGTCTTCCAGGCGAAGAGCGGGTTCTCGAACCTCTCGGT---	CTGGTTGAGGAACCTGTTAAGACGGCT
rh. 48-D	351	AGTCTTCCAGGCGAAGAGCGGGTTCTCGAACCTCTCGGT---	CTGGTTGAGGAACCTGTTAAGACGGCT
rh. 55-D	351	AGTCTTCCAGGCGAAGAGCGGGTTCTCGAACCTCTCGGT---	CTGGTTGAGGAACCTGTTAAGACGGCT
rh. 62-D	351	AGTCTTCCAGGCGAAGAGCGGGTTCTCGAACCTCTCGGT---	CTGGTTGAGGAACCTGTTAAGACGGCT
AAV7-D	351	AGTCTTCCAGGCGAAGAGCGGGTTCTCGAACCTCTCGGT---	CTGGTTGAGGAACCTGTTAAGACGGCT
rh. 52-E	351	AGTCTTCCAGGCGAAGAGCGGGTTCTCGAACCTCTCGGT---	CTGGTTGAGGAACCTGTTAAGACGGCT
rh. 51-E	351	AGTCTTCCAGGCGAAGAGCGGGTTCTCGAACCTCTCGGT---	CTGGTTGAGGAACCTGTTAAGACGGCT
hu. 39-E	351	AGTCTTCCAGGCGAAGAGCGGGTTCTCGAACCTCTCGGT---	CTGGTTGAGGAACCTGTTAAGACGGCT
rh. 53-E	351	AGTCTTCCAGGCGAAGAGCGGGTTCTCGAACCTCTCGGT---	CTGGTTGAGGAACCTGTTAAGACGGCT
hu. 37-E	351	AGTCTTCCAGGCGAAGAGCGGGTTCTCGAACCTCTCGGT---	CTGGTTGAGGAACCTGTTAAGACGGCT
rh. 43-E	351	AGTCTTCCAGGCGAAGAGCGGGTTCTCGAACCTCTCGGT---	CTGGTTGAGGAACCTGTTAAGACGGCT
rh. 50-E	351	AGTCTTCCAGGCGAAGAGCGGGTTCTCGAACCTCTCGGT---	CTGGTTGAGGAACCTGTTAAGACGGCT
rh. 49-E	351	AGTCTTCCAGGCGAAGAGCGGGTTCTCGAACCTCTCGGT---	CTGGTTGAGGAACCTGTTAAGACGGCT

FIG. 3B



hu. 47-B 418 CCGGGAAAAAGAGGCCGGTAGAGCACTCTCTGTG---GAGCCAGACTCTCTCTCGGGAAACCGGAAAGG  
 hu. 29-B 418 CCGGGAAAAAGAGGCCGGTAGAGCACTCTCTGCA---GAGCCAGATTCTCTCTCGGAACTGGAAAGT  
 hu. 63-B 418 CCGGGAAAAAGAGGCCGGTAGAGCACTCTCTGCG---GAGCCAGACTCTCTCTCGGAAACCGGAAAG  
 hu. 56-B 418 CCGGGAAAAAGAGGCCGGTAGAGCACTCTCTGTG---GAGCCAGACTCTCTCTCGGAAACCGGAAAG  
 hu. 45-B 418 CCGGGAAAAAGAGGCCGGTAGAGCACTCTCTGTG---GAGCCAGACTCTCTCTCGGAAACCGGAAAGG  
 hu. 57-B 415 CCGGGAAAAAGAGGCCGGTAGAGCACTCTCTGTG---GAGCCAGACTCTCTCTCGGAAACCGGAAAG  
 hu. 35-B 418 CCGGGAAAAAGAGGCCGGTAGAGCACTCTCTGTG---GAGCCAGACTCTCTCTCGGAAACCGGAAAGG  
 hu. 58-B 418 CCGGGAAAAAGAGGCCGGTAGAGCACTCTCTGTG---GAGCCAGACTCTCTCTCGGAAACCGGAAAG  
 hu. 28-B 418 CCGGGAAAAAGAGGCCGGTAGAGCACTCTCCGCA---GAGCCAGATTCTCTCTCGGAACTGGAAAGT  
 hu. 51-B 418 CCAGGAAAAAGAGGCCGGTAGAGCACTCTCTGTG---GAGCCAGACTCTCTCTCGGAAACCGGAAAGG  
 hu. 19-B 418 CCGGGAGAAAAAGAGGCCGGTAGAGCACTCTCTGCG---GAGCCAGACTCTCTCTCGGAAACCGGAAAG  
 hu. 49-B 418 CCGGGAAAAAGAGGCCGGTAGAGCACTCTCTGTG---GAGCCAGACTCTCTCTCGGAAACAGGAAAG  
 hu. 52-B 418 CCGGGAAAAAGAGGCCGGTAGAGCACTCTCTGTG---GAGCCAGACTCTCTCTCGGAAACCGGAAAGG  
 hu. 13-B 418 CCGGGAAAAAGAGGCCGGTAGAGCACTCTCTGCG---GAGCCAGACTCTCTCTCGGAAACCGGAAAG  
 AAV2-B 418 CCGGGAAAAAGAGGCCGGTAGAGCACTCTCTGTG---GAGCCAGACTCTCTCTCGGAAACCGGAAAG  
 hu. 20-B 418 CCGGGAAAAAGAGGCCGGTAGAGCACTCTCTGCG---GAGCCAGACTCTCTCTCGGAAACCGGAAAG  
 hu. 24-B 418 CCGGGAAAAAGAGGCCGGTAGAGCACTCTCTGCG---GAGCCAGACTCTCTCTCGGAAACCGGAAAG  
 hu. 64-B 418 CCGGGAAAAAGAGGCCGGTAGAGCACTCTTGTG---GAGCCAGACTCTCTCTCGGAAACCGGAAAG  
 hu. 27-B 418 CCGGGAAAAAGAGGCCGGTAGAGCACTCTCTGCG---GAGCCAGACTCTCTCTCGGAAACCGGAAAG  
 hu. 21-B 418 CCGGGAAAAAGAGGCCGGTAGAGCACTCTCTGCG---GAGCCAGACTCTCTCTCGGAAACCGGAAAG  
 hu. 22-B 418 CCGGGAAAAAGAGGCCGGTAGAGCACTCTCTGCG---GAGCCAGACTCTCTCTCGGAAACCGGAAAG  
 hu. 23-B 418 CCGGGAAAAAGAGGCCGGTAGAGCACTCTCTGCG---GAGCCAGACTCTCTCTCGGAAACCGGAAAG  
 hu. 7-C 418 CCGGGAAAAAGAGGCCGGTAGAGCACTCTCTGCG---GAGCCAGACTCTCTCTCGGAAACCGGAAAG  
 hu. 61-C 418 CCGGGAAAAAGAGGCCGGTAGAGCACTCTCTGTG---GAGCCAGACTCTCTCTCGGAAACCGGAAAG  
 rh. 56-C 418 CCGGGAAAAAGAGGCCGGTAGAGCACTCTCTGCG---GAGCCAGACTCTCTCTCGGAAACCGGAAAG  
 hu. 9-C 418 CCGGGAAAAAGAGGCCGGTAGAGCACTCTCTGTG---GAGCCAGACTCTCTCTCGGAAACCGGAAAG  
 hu. 54-C 418 CCGGGAAAAAGAGGCCGGTAGAGCACTCTCTGCG---GAGCCAGACTCTCTCTCGGAAACCGGAAAG  
 hu. 53-C 418 CCGGGAAAAAGAGGCCGGTAGAGCACTCTCTGCG---GAGCCAGACTCTCTCTCGGAAACCGGAAAG  
 hu. 60-C 418 CCGGGAAAAAGAGGCCGGTAGAGCACTCTCTGTG---GAGCCAGACTCTCTCTCGGAAACCGGAAAG  
 hu. 55-C 418 CCGGGAAAAAGAGGCCGGTAGAGCACTCTCTGCG---GAGCCAGACTCTCTCTCGGAAACCGGAAAG

hu.2-C	418	CCGGGAAAAAGAGGCGGTAGAGCACTCTCTGTG---GAGCCAGACTCCTCTCGGGAACCGGAAAG
hu.1-C	418	CCGGGAAAAAGAGGCGGTAGAGCACTCTCTGTG---GAGCCAGACTCCTCTCGGGAACCGGAAAG
hu.18-C	418	CCGGGAAAAAGAGGCGGTAGAGCACTCTCTGTG---GAGCCAGACTCCTCTCGGGAACCGGAAAG
hu.3-C	421	CCGGGAAAAAGAGGCGGTAGAGCACTCTCTGTG---GAGCCAGACTCCTCTCGGGAACCGGAAAG
hu.25-C	418	CCGGGAAAAAGAGACCGGTAGAGCACTCTCTGCG---GAGCCAGACTCCTCTCGGGAACCGGAAAG
hu.15-C	418	CCGGGAAAAAGAGGCGGTAGAGCACTCTCTGTG---GAGCCAGACTCCTCTCGGGAACCGGAAAG
hu.16-C	418	CCGGGAAAAAGAGGCGGTAGAGCACTCTCTGTG---GAGCCAGACTCCTCTCGGGAACCGGAAAG
hu.11-C	418	CCGGGAAAAAGAGGCGGTAGAGCACTCTCTGTG---GAGCCAGACTCCTCTCGGGAACCGGAAAG
hu.10-C	418	CCGGGAAAAAGAGGCGGTAGAGCACTCTCTGTG---GAGCCAGACTCCTCTCGGGAACCGGAAAG
hu.4-C	418	CCGGGAAAAAGAGGCGGTAGAGCACTCTCTGTG---GAGCCAGACTCCTCTCGGGAACCGGAAAG
rh.54-D	418	CCTGGAAAGAAAGAGACCGGTAGAACCGTCACTCAGCGTTCCCCCGACTCCTCCACGGGCATCGGCAAGA
rh.48-D	418	CCTGGAAAGAAAGAGACCGGTAGAACCGTCACTCAGCGTTCCCCCGACTCCTCCACGGGCATCGGCAAGA
rh.55-D	418	CCTGGAAAGAAAGAGACCGGTAGAGCCGTCACTCAGCGTTCCCCCGACTCCTCCACGGGCATCGGCAAGA
rh.62-D	418	CCTGGAAAGAAAGAGACCGGTAGAACCGTCACTCAGCGTTCCCCCGACTCCTCCACGGGCATCGGCAAGA
AAV7-D	418	CCTGCAAGAAAGAGACCGGTAGAGCCGTCACTCAGCGTTCCCCCGACTCCTCCACGGGCATCGGCAAGA
rh.52-E	418	CCTGGAAAGAAAGAGACCGGTAGAGCCGTCACTCAGCGTTCCCCCGACTCCTCCACGGGCATCGGCAAGA
rh.51-E	418	CCTGGAAAGAAAGAGACCGGTAGAGCCGTCACTCAGCGTTCCCCCGACTCCTCCACGGGCATCGGCAAGA
hu.39-E	418	CCTGGAAAGAAAGAGACCGGTAGAGCCGTCACTCAGCGTTCCCCCGACTCCTCCACGGGCATCGGCAAGA
rh.53-E	418	CCTGGAAAGAAAGAGACCGGTAGAGCCGTCACTCAGCGTTCCCCCGACTCCTCCACGGGCATCGGCAAGA
hu.37-E	418	CCTGGAAAGAAAGAGACCGGTAGAACCGTCACTCAGCGTTCCCCCGACTCCTCCACGGGCATCGGCAAGA
rh.43-E	418	CCTGGAAAGAAAGAGACCGGTAGAGCCGTCACTCAGCGTTCCCCCGACTCCTCCACGGGCATCGGCAAGA
rh.50-E	418	CCTGGAAAGAAAGAGACCGGTAGAGCCGTCACTCAGCGTTCCCCCGACTCCTCCACGGGCATCGGCAAGA
rh.49-E	418	CCTGGAAAGAAAGAGACCGGTAGAGCCGTCACTCAGCGTTCCCCCGACTCCTCCACGGGCATCGGCAAGA
rh.61-E	418	CCTGGAAAGAAAGAGACCGGTAGAGCCGTCACTCAGCGTTCCCCCGACTCCTCCACGGGCATCGGCAAGA
hu.41-E	418	CCTGGAAAGAAAGAGACCGGTAGAACCGTCACTCAGCGTTCCCCCGACTCCTCCACGGGCATCGGCAAGA
rh.64-E	418	CCTGGAAAGAAAGAGACCGGTAGAGCCGTCACTCAGCGTTCCCCCGACTCCTCCACGGGCATCGGCAAGA
hu.42-E	418	CCTGGAAAGAAAGAGACCGGTAGAACCGTCACTCAGCGTTCCCCCGACTCCTCCACGGGCATCGGCAAGA
rh.57-E	418	CCTGGAAAGAAAGAGACCGGTAGAGCCGTCACTCAGCGTTCCCCCGACTCCTCCACGGGCATCGGCAAGA
hu.40-E	418	CCTGGAAAGAAAGAGACCGGTAGAACCGTCACTCAGCGTTCCCCCGACTCCTCCACGGGCATCGGCAAGA
AAV8-E	418	CCTGGAAAGAAAGAGACCGGTAGAGCCATCACTCAGCGTTCTCCAGACTCCTCTACGGGCATCGGCAAGA



rh. 58-E	418	CCTGGAAGAAGAGACCGGTAGAACCGTCACTCAGCGTTCCCCGACTCCTCCACGGGCATCGGCAAGA	500	510	520	530	540	550	560
rh. 40-E	418	CCTGGAAGAAGAGACCGGTAGAACCGTCACTCAGCGTTCCCCGACTCCTCCACGGGCATCGGCAAGA	.... .... .... .... .... .... .... .... .... ....						
hu. 67-E	418	CCTGGAAGAAGAGACCGGTAGAACCGTCACTCAGCGTTCCCCGACTCCTCCACGGGCATCGGCAAGA							
hu. 17-E	418	CCTGGAAGAAGAGACCGGTAGAGCCATCACCCAGCGTTCTCCAGACTCCTCTACGGGCATCGGCAAGA							
hu. 6-E	418	CCTGGAAGAAGAGACCGGTAGAGCCATCACCCAGCGTTCTCCAGACTCCTCTACGGGCATCGGCAAGA							
hu. 66-E	418	CCTGGAAGAAGAGACCGGTAGAACCGTCACTCAGCGTTCCCCGACTCCTCCGCGGCATCGGCAAGA							
rh. 38-E	418	CCTGGAAGAAGAGACCGGTAGAACCGTCACTCAGCGTTCCCCGACTCCTCCACGGGCATCGGCAAGA							
hu. 32-F	418	CCTGGAAGAAGAGAGGCGTGTAGAGCAGTCTCCTCAG---GAACCGGACTCCTCCGCGGGTATTGGCAAAAT							
AAV9/hu	418	CCTGGAAGAAGAGAGGCGTGTAGAGCAGTCTCCTCAG---GAACCGGACTCCTCCGCGGGTATTGGCAAAAT							
hu. 31-F	418	CCTGGAAGAAGAGAGGCGTGTAGAGCAGTCTCCTCAG---GAACCGGACTCCTCCGCGGGTATTGGCAAAAT							
AAV5	452	GAAGAAGGCTCGGACCGAAGAGGACTCCAAAGCCTTCCACCTCGTCAGACGCCGGAAGCTGGACCCAGCGG	.... .... .... .... .... .... .... .... .... ....						
AAV3-3	485	CGGCCAAACAGCCTGCCAGAAAAGACTAAATTTTCGGTCAGACTGGAGACTCAGAGTCAGTCCCAGAC--							
AAV4-4	482	AAGGCAAGCAGCGGCTAAAAGAGCTCGTTTTCGAAGACGAAACTGGAGCAGGCGACGGAACCC--							
AAV1-A	485	CAGGCCAGCAGCCCCGCTAAAAGAGACTCAATTTTGGTCAGACTGGCGACTCAGAGTCAGTCCCCGAT--							
hu. 46-A	485	CAGGCCAGCAGCCCCGCTAAAAGAGACTCAATTTTGGTCAGACTGGCGACTCAGAGTCAGTCCCCGAT--							
hu. 48-A	485	CAGGCCAGCAGCCCCGCTAAAAGAGACTCAATTTTGGCCAGACTGGCGACTCAGAGTCAGTCCCCGAT--							
hu. 44-A	485	CAGGCCAGCAGCCCCGCTAAAAGAGACTCAATTTTGGTCAGACTGGCGACTCAGAGTCAGTCCCCGAT--							
hu. 43-A	488	AAGGCCAGCAGCCCCGCTAAAAGAGACTGAACTTTGGTCAGACTGGCGACTCAGAGTCAGTCCCCGAC--							
AAV6-A	485	CAGGCCAGCAGCCCCGCTAAAAGAGACTCAATTTTGGTCAGACTGGCGACTCAGAGTCAGTCCCCGAC--							
hu. 34-B	485	CGGCCAGCAGCCTGCAAGAAAAGATTGAATTTTGGTCAGACTGGAGACGCAGACTCAGTACCTGAC--							
hu. 47-B	485	CGGCCAGCAGCCTGCAAGAAAAGATTGAATTTTGGTCAGACTGGAGACGCAGACTCAGTACCTGAC--							
hu. 29-B	485	CGGGCAACCAGCCTGCAAGAAAAGATTGAATTTTCCGTCAGACTGGAGACTCAGACTCCGTACCTGAC--							
hu. 63-B	485	CGGCCAGCAGCCTGCAAGAAAAGATTGAATTTTCCGTCAGACTGGAGACGCAGACTCCGTACCTGAC--							
hu. 56-B	485	CGGGCAACCAGCCTGCAAGAAAAGATTGAATTTTCCGTCAGACTGGAGACGCAGACTCCGTACCTGAC--							
hu. 45-B	485	CGGCCAGCAGCCTGCAAGAAAAGATTGAATTTTCCGTCAGACTGGAGACGCAGACTCCGTACCTGAC--							
hu. 57-B	482	CGGGCAACCAGCCTGCAAGAAAAGATTGAATTTTCCGTCAGACTGGAGACGCAGACTCCGTACCTGAC--							
hu. 35-B	485	CGGCCAGCAGCCTGCAAGAAAAGATTGAATTTTGGTCAGACTGGAGACGCAGACTCAGTACCTGAC--							

FIG. 3F



hu.58-B 485 CCGGCAACCGCCTGCAAGAAAGAGATTGAATTTTCGGTCAGACTGGAGACGCAGACTCCCGTACCTGAC--  
 hu.28-B 485 CCGGCAACCGCCTGCAAGAAAGAGATTGAATTTTCGGTCAGACTGGAGACTCAGACTCCGTACCTGAC--  
 hu.51-B 485 CCGGCCAGCAGCCTGCAAGAAAAGATTGAATTTTGGTCAGACTGGAGACGCAGACTCAGTACCTGAC--  
 hu.19-B 485 CCGGCCAGCAGCCTGCAAGAAAAGATTGAATTTTGGCCAGACTGGAGACGCAGACTCAGTACCTGAC--  
 hu.49-B 485 CCGGCCAGCAGCCTGCGAGAAAAGATTGAATTTTGGTCAGACTGGAGACGCAGACTCAGTACCTGAC--  
 hu.52-B 485 CCGGCCAGCAGCCTGCAAGAAAAGATTGAATTTTGGTCAGACTGGAGACGCAGACTCCGTACCTGAC--  
 hu.13-B 485 CCGGCCAGCAGCCTGCAAGAAAAGATTGAATTTTCGGTCAGACTGGAGACGCAGACTCCGTACCTGAC--  
 AAV2-B 485 CCGGCCAGCAGCCTGCAAGAAAAGATTGAATTTTGGTCAGACTGGAGACGCAGACTCAGTACCTGAC--  
 hu.20-B 485 CCGGCCAGCAGCCTGCAAGAAAAGATTGAATTTTGGTCAGACTGGAGACGCAGACTCAGTACCTGAC--  
 hu.24-B 485 CCGGCCAGCAGCCTGCAAGAAAAGATTGAATTTTGGTCAGACTGGAGACGCAGACTCAGTACCTGAC--  
 hu.64-B 485 CCGGCCAGCAGCCTGCAAGAAAAGATTGAATTTTCGGTCAGACTGGAGACGCAGACTCCGTACCTGAC--  
 hu.27-B 485 CCGGCCAGCAGCCTGCAAGAAAAGATTGAATTTTGGTCAGACTGGAGACGCAGACTCAGTACCTGAC--  
 hu.21-B 485 CCGGCCAGCAGCCTGCAAGAAAAGATTGAATTTTGGTCAGACTGGAGACGCAGACTCAGTACCTGAC--  
 hu.22-B 485 CCGGCCAGCAGCCTGCAAGAAAAGATTGAATTTTGGTCAGACTGGAGACGCAGACTCAGTACCTGAC--  
 hu.23-B 485 CCGGCCAGCAGCCTGCAAGAAAAGATTGAATTTTGGTCAGACTGGAGACGCAGACTCAGTACCTGAC--  
 hu.7-C 485 CCGGCCAGCAGCCTGCAAGAAAAGATTGAATTTTGGTCAGACTGGAGACGCAGACTCCGTACCTGAC--  
 hu.61-C 485 CCGGCCAGCAGCCTGCAAGAAAAGATTGAATTTTCGGTCAGACTGGAGACGCAGACTCCGTACCTGAC--  
 rh.56-C 485 CCGGCCAGCAGCCTGCAAGAAAAGATTGAATTTTGGTCAGACTGGAGACGCAGACTCCGTACCTGAC--  
 hu.9-C 485 CCGGCCATCAGCCTGCGAGAAAAGATTGAATTTTGGTCAGACTGGAGACGCAGACTCCGTACCTGAC--  
 hu.54-C 485 CCGGCCAGCAGCCTGCAAGAAAAGATTGAATTTTCGGTCAGACTGGAGACGCAGACTCCGTACCTGAC--  
 hu.53-C 485 CCGGCCAGCAGCCTGCAAGAAAAGATTGAATTTTCGGTCAGACTGGAGACGCAGACTCCGTACCTGAC--  
 hu.60-C 485 CCGGCCAGCAGCCTGCAAGAAAAGATTGAATTTTCGGTCAGACTGGAGACGCAGACTCCGTACCTGAC--  
 hu.55-C 485 CCGGCCAGCAGCCTGCAAGAAAAGATTGAATTTTCGGTCAGACTGGAGACGCAGACTCCGTACCTGAC--  
 hu.2-C 485 CCGGCCAGCGGCTGCAAGAAAAGATTGAATTTTGGTCAGACTGGAGACGCAGACTCCGTACCTGAC--  
 hu.1-C 485 CCGGCCAGCAGCCTGCAAGAAAAGATTGAATTTTGGTCAGACTGGAGACGCAGACTCCGTACCTGAC--  
 hu.18-C 485 CCGGCCAGCAGCCTGCGAGAAAAGATTGAATTTTGGTCAGACTGGAGACGCAGACTCCGTACCTGAC--  
 hu.3-C 488 CCGGCCAGCAGCCTGCAAGAAAAGATTGAATTTTGGTCAGACTGGAGACGCAGACTCCGTACCTGAC--  
 hu.25-C 485 CCGGCCAGCAGCCTGCAAGAAAAGATTGAATTTTGGTCAGACTGGAGACGCAGACTCCGTACCTGAC--  
 hu.15-C 485 CCGGCCAACCAGCCTGCAAGAAAAGATTGAATTTTGGTCAGACTGGAGACGCAGACTCCGTACCTGAC--  
 hu.16-C 485 CCGGCCAACCAGCCTGCAAGAAAAGATTGAATTTTGGTCAGACTGGAGACGCAGACTCCGTACCTGAC--

FIG. 3U



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hu.32-F	485	CGGGTTACAGCCCGCTAAAAAGAACTCAATTTCCGTCCAGACTGGCGACACAGAGTCAGTCCCCGAC--	570	580	590	600	610	620	630
AAV9/hu	485	CGGGTGACAGCCCGCTAAAAAGAGACTCAATTTCCGTCCAGACTGGCGACACAGAGTCAGTCCCAGAC--							
hu.31-F	485	CGGGTTACAGCCCGCTAAAAAGAACTCAATTTCCGTCCAGACTGGCGACACAGAGTCAGTCCCCGAC--							
		.... .... .... .... .... .... .... .... .... .... .... .... .... ....							
AAV5	522	ATCCCAGCAGCTGCAAAATCCCAGCCCCAACCCAGCCTCAAGTTTGGGAGCTGATACAAATGTCTCGGGAGGTT							
AAV3-3	552	-CCTCAACCTCTCGGAGAACCCAGCAGCCCCCACAAGTTTGGGATCTAATAACAATGGCTTCAGGCGGT							
AAV4-4	546	-----CCTGAGGGATCAACTTCCGGAGCCAATGTCT-----GATGACAGTGAGATGCGTGCAGCAGCT							
AAV1-A	552	-CCACAACCTCTCGGAGAACCTCCAGCAACCCCCCGTGTGTGGGACCTACTACAATGGCTTCAGGCGGT							
hu.46-A	552	-CCACAACCTCTCGGAGAACCTCCAGCAACCCCCCGTGTGTGGGACCTACTACAATGGCTTCAGGCGGT							
hu.48-A	552	-CCACAACCTCTCGGAGAACCTCCAGCAACCCCCCGTGTGTGGGACCTACTACAATGGCTTCAGGCGGT							
hu.44-A	552	-CCACAACCTCTCGGAGAACCTCCAGCAACCCCCCGTGTGTGGGACCTACTACAATGGCTTCAGGCGGT							
hu.43-A	555	-CCTCAACCAATCGGAGAACCCAGCAGGCCCCCTCTGGTCTGGGATCTGGTACAAATGGCTGCAGGCGGT							
AAV6-A	552	-CCACAACCTCTCGGAGAACCTCCAGCAACCCCCCGTGTGTGGGACCTACTACAATGGCTTCAGGCGGT							
hu.34-B	552	-CCCCAGCCTCTCGGACAGCCACCCAGCAGCCCCCTCTGGTCTGGGAACTAATACGATGGCTACAGGCAGT							
hu.47-B	552	-CCCCAGCCTCTCGGACAGCCACCCAGCAGCCCCCTCTGGTCTGGGAACTAATACGATGGCTACAGGCAGT							
hu.29-B	552	-CCCCAGCCTCTCGGACAGCCACCCAGCAGCCCCCTCTGGTCTGGGAACTAATACGATGGCTACAGGCAGT							
hu.63-B	552	-CCCCAGCCTCTCGGACAGCCACCCAGCAGCCCCCTCTGGTCTGGGAACTAATACGATGGCTACAGGCAGT							
hu.56-B	552	-CCCCAGCCTCTCGGACAGCCACCCAGCAGCCCCCTCTGGTCTGGGAACTAATACGATGGCTACAGGCAGT							
hu.45-B	552	-CCCCAGCCTCTCGGACAGCCACCCAGCAGCCCCCTCTGGTCTGGGAACTAATACGATGGCTACAGGCAGT							
hu.57-B	549	-CCCCAGCCTCTCGGACAGCCACCCAGCAGCCCCCTCTGGTCTGGGAACTAATACGATGGCTACAGGCAGT							
hu.35-B	552	-CCCCAGCCTCTCGGACAGCCACCCAGCAGCCCCCTCTGGTCTGGGAACTAATACGATGGCTACAGGCAGT							
hu.58-B	552	-CCCCAGCCTCTCGGACAGCCACCCAGCAGCCCCCTCTGGTCTGGGAACTAATACGATGGCTACAGGCAGT							
hu.28-B	552	-CCCCAGCCTCTCGGACAGCCACCCAGCAGCCCCCTCTGGTCTGGGAACTAATACGATGGCTACAGGCAGT							
hu.51-B	552	-CCCCAGCCTCTCGGACAGCCACCCAGCAGCCCCCTCTGGTCTGGGAACTAATACGATGGCTACAGGCAGT							
hu.19-B	552	-CCCCAGCCTCTCGGACAGCCACCCAGCAGCCCCCTCTGGTCTGGGAACTAATACGATGGCTTCAGGCAGT							
hu.49-B	552	-CCCCAGCCTCTCGGACAGCCACCCAGCAGCCCCCTCTGGTCTGGGAACTAATACGATGGCTTCAGGCAGT							
hu.52-B	552	-CCCCAGCCTCTCGGACAGCCACCCAGCAGCCCCCTCTGGTCTGGGAACTAATACGATGGCTTCAGGCAGT							
hu.13-B	552	-CCCCAGCCTCTCGGACAGCCACCCAGCAGCCCCCTCTGGTCTGGGAACTAATACGATGGCTTCAGGCAGT							

FIG. 3W

AAV2-B	552	-CCCCAGCCTCTCGGACAGCCACCAGCAGCCCCCTCTGGTCTGGAACCTAATACGATGGCTACAGGCAGT
hu. 20-B	552	-CCCCAGCCTCTCGGACAGCCACCAGCAGCCCCCTCTGGTCTGGAACCTAATACGATGGCTTACAGGCAGT
hu. 24-B	552	-CCCCGGCCTCTCGGACAGCCACCAGCAGCCCCCTCTGGTCTGGAACCTAATACGATGGCTTACAGGCAGT
hu. 64-B	552	-CCCCAGCCTCTCGGACAGCCACCAGCAGCCCCCTCTGGTCTGGAACCTAATACGATGGCTACAGGCAGT
hu. 27-B	552	-CCCCAGCCTCTCGGACAGCCACCAGCAGCCCCCTCTGGTCTGGAACCTAATACGATGGCTTACAGGCAGT
hu. 21-B	552	-CCCCGGCCTCTCGGACAGCCACCAGCAGCCCCCTCTGGTCTGGAACCTAATACGATGGCTTACAGGCAGT
hu. 22-B	552	-CCCCAGCCTCTCGGACAGCCACCAGCAGCCCCCTCTGGTCTGGAACCTAATACGATGGCTTACAGGCAGT
hu. 23-B	552	-CCCCAGCCTCTCGGACAGCCACCAGCAGCCCCCTCTGGTCTGGAACCTAATACGATGGCTTACAGGCAGT
hu. 7-C	552	-CCCCAGCCTCTCGGACAGCCACCAGCAGCCCCCTCTGGTCTGGAACCTAATACGATGGCTTACAGGCAGT
hu. 61-C	552	-CCCCAGCCTCTCGGACAGCCACCAGCAGCCCCCTCTGGTCTGGAACCTAATACGATGGCTTACAGGCAGT
rh. 56-C	552	-CCCCAGCCTCTCGGACAGCCACCAGCAGCCCCCTCTGGTCTGGAACCTAATACGATGGCTTACAGGCAGT
hu. 9-C	552	-CCCCAGCCTCTCGGACAGCCACCAGCAGCCCCCTCTGGTCTGGAACCTAATACGATGGCTTACAGGCAGT
hu. 54-C	552	-CCCCAGCCTCTCGGACAGCCACCAGCAGCCCCCTCTGGTCTGGAACCTAATACGATGGCTTACAGGCAGT
hu. 53-C	552	-CCCCAGCCTCTCAGACAGCCACCAGCAGCCCCCTCTGGTCTGGAACCTAATACGATGGCTTACAGGCAGT
hu. 60-C	552	-CCCCAGCCTCTCGGACAGCCACCAGCAGCCCCCTCTGGTCTGGAACCTAATACGATGGCTTACAGGCAGT
hu. 55-C	552	-CCCCAGCCTCTCGGACAGCCACCAGCAGCCCCCTCTGGTCTGGAACCTAATACGATGGCTTACAGGCAGT
hu. 2-C	552	-CCCCAGCCTCTCGGACAGCCACCAGCAGCCCCCTCTGGTCTGGAACCTAATACGATGGCTTACAGGCAGT
hu. 1-C	552	-CCCCAGCCTCTCGGACAGCCACCAGCAGCCCCCTCTGGTCTGGAACCTAATACGATGGCTTACAGGCAGT
hu. 18-C	552	-CCCCAGCCTCTCGGACAGCCACCAGCAGCCCCCTCTGGTCTGGAACCTAATACGATGGCTTACAGGCAGT
hu. 3-C	555	-CCCCAGCCTCTCGGACAGCCACCAGCAGCCCCCTCTGGTCTGGAACCTAATACGATGGCTTACAGGCAGT
hu. 25-C	552	-CCCCAGCCTCTCGGACAGCCACCAGCAGCCCCCTCTGGTCTGGAACCTAATACGATGGCTTACAGGCAGT
hu. 15-C	552	-CCCCAGCCTCTCGGACAGCCACCAGCAGCCCCCTCTGGTCTGGAACCTAATACGATGGCTTACAGGCAGT
hu. 16-C	552	-CCCCAGCCTCTCGGACAGCCACCAGCAGCCCCCTCTGGTCTGGAACCTAATACGATGGCTTACAGGCAGT
hu. 11-C	552	-CCCCAGCCTCTCGGACAGCCACCAGCAGCCCCCTCTGGTCTGGAACCTAATACGATGGCTTACAGGCAGT
hu. 10-C	552	-CCCCAGCCTCTCGGACAGCCACCAGCAGCCCCCTCTGGTCTGGAACCTAATACGATGGCTTACAGGCAGT
hu. 4-C	552	-CCCCAGCCTCTCGGACAGCCACCAGCAGCCCCCTCTGGTCTGGAACCTAATACGATGGCTTACAGGCAGT
rh. 54-D	555	-CCTCAACCTCTCGGAGAACCCAGCAGGCCCCCTCTGGTCTGGAACCTAATACGATGGCTTACAGGCAGT
rh. 48-D	555	-CCTCAACCTCTCGGAGAACCCAGCAGGCCCCCTCTGGTCTGGAACCTAATACGATGGCTTACAGGCAGT
rh. 55-D	555	-CCTCAACCTCTCGGAGAACCCAGCAGGCCCCCTCTGGTCTGGAACCTAATACGATGGCTTACAGGCAGT
rh. 62-D	555	-CCTCAACCTCTCGGAGAACCCAGCAGGCCCCCTCTGGTCTGGAACCTAATACGATGGCTTACAGGCAGT



AAV3-3 622 GCGCACCAATGGCAGACAATAACGAGGGTGCCGATGGAGTGGGTAATTCCTCAGGAAATTGGCATTGCG  
 AAV4-4- 604 GCGGAGTCAGTGGAGGGGACAAAGTGCCGATGGAGTGGTAATGCCCTCGGTGATTGGCATTGCG  
 AAV1-A- 622 GCGCACCAATGGCAGACAATAACGAAGGCGCCGACGGAGTGGTAATGCCCTCAGGAAATTGGCATTGCG  
 hu.46-A 622 GCGCACCAATGGCAGACAATAACGAAGGCGCCGACGGAGTGGTAATGCCCTCAGGAAATTGGCATTGCG  
 hu.48-A 622 GCGCACCAATGGCAGACAATAACGAAGGCGCCGACGGAGTGGTAATGCCCTCAGGAAATTGGCATTGCG  
 hu.44-A 622 GCGCACCAATGGCAGACAATAACGAAGGCGCCGACGGAGTGGTAATGCCCTCAGGAAATTGGCATTGCG  
 hu.43-A 625 GCGCTCCAATGGCAGACAATAACGAAGGCGCCGACGGAGTGGTAATGCCCTCAGGAAATTGGCATTGCG  
 AAV6-A 622 GCGCACCAATGGCAGACAATAACGAAGGCGCCGACGGAGTGGTAATGCCCTCAGGAAATTGGCATTGCG  
 hu.34-B 622 GCGCACCAATGGCAGACAATAACGAAGGCGCCGACGGAGTGGTAATGCCCTCAGGAAATTGGCATTGCG  
 hu.47-B 622 GCGCACCAATGGCAGACAATAACGAAGGCGCCGACGGAGTGGTAATGCCCTCAGGAAATTGGCATTGCG  
 hu.29-B 622 GCGCACCAATGGCAGACAATAACGAAGGCGCCGACGGAGTGGTAATGCCCTCAGGAAATTGGCATTGCG  
 hu.63-B 622 GCGCACCAATGGCAGACAATAACGAAGGCGCCGACGGAGTGGTAATGCCCTCAGGAAATTGGCATTGCG  
 hu.56-B 622 GCGCACCAATGGCAGACAATAACGAAGGCGCCGACGGAGTGGTAATGCCCTCAGGAAATTGGCATTGCG  
 hu.45-B 622 GCGCACCAATGGCAGACAATAACGAAGGCGCCGACGGAGTGGTAATGCCCTCAGGAAATTGGCATTGCG  
 hu.57-B 619 GCGCACCAATGGCAGACAATAACGAAGGCGCCGACGGAGTGGTAATGCCCTCAGGAAATTGGCATTGCG  
 hu.35-B 622 GCGCACCAATGGCAGACAATAACGAAGGCGCCGACGGAGTGGTAATGCCCTCAGGAAATTGGCATTGCG  
 hu.58-B 622 GCGCACCAATGGCAGACAATAACGAAGGCGCCGACGGAGTGGTAATGCCCTCAGGAAATTGGCATTGCG  
 hu.28-B 622 GCGCACCAATGGCAGACAATAACGAAGGCGCCGACGGAGTGGTAATGCCCTCAGGAAATTGGCATTGCG  
 hu.51-B 622 GCGCACCAATGGCAGACAATAACGAAGGCGCCGACGGAGTGGTAATGCCCTCAGGAAATTGGCATTGCG  
 hu.19-B 622 GCGCACCAATGGCAGACAATAACGAAGGCGCCGACGGAGTGGTAATGCCCTCAGGAAATTGGCATTGCG  
 hu.49-B 622 GCGCACCAATGGCAGACAATAACGAAGGCGCCGACGGAGTGGTAATGCCCTCAGGAAATTGGCATTGCG  
 hu.52-B 622 GCGCACCAATGGCAGACAATAACGAAGGCGCCGACGGAGTGGTAATGCCCTCAGGAAATTGGCATTGCG  
 hu.13-B 622 GCGCACCAATGGCAGACAATAACGAAGGCGCCGACGGAGTGGTAATGCCCTCAGGAAATTGGCATTGCG  
 AAV2-B 622 GCGCACCAATGGCAGACAATAACGAAGGCGCCGACGGAGTGGTAATGCCCTCAGGAAATTGGCATTGCG  
 hu.20-B 622 GCGCACCAATGGCAGACAATAACGAAGGCGCCGACGGAGTGGTAATGCCCTCAGGAAATTGGCATTGCG  
 hu.24-B 622 GCGCACCAATGGCAGACAATAACGAAGGCGCCGACGGAGTGGTAATGCCCTCAGGAAATTGGCATTGCG  
 hu.64-B 622 GCGCACCAATGGCAGACAATAACGAAGGCGCCGACGGAGTGGTAATGCCCTCAGGAAATTGGCATTGCG  
 hu.27-B 622 GCGCACCAATGGCAGACAATAACGAAGGCGCCGACGGAGTGGTAATGCCCTCAGGAAATTGGCATTGCG  
 hu.21-B 622 GCGCACCAATGGCAGACAATAACGAAGGCGCCGACGGAGTGGTAATGCCCTCAGGAAATTGGCATTGCG  
 hu.22-B 622 GCGCACCAATGGCAGACAATAACGAAGGCGCCGACGGAGTGGTAATGCCCTCAGGAAATTGGCATTGCG

hu. 23-B	622	GGCGACCAATGGCAGACAATAACGAGGGCGCCGACGGAGTGGGTAATCCTCGGGAAATTGGCATTGCG
hu. 7-C	622	GGCGACCAATGGCAGACAATAACGAGGGTGCCGATGGAGTGGGTAATCCTCAGGAAATTGGCATTGCG
hu. 61-C	622	GGCGACCAATGGCAGACAATAACGAGGGTGCCGATGGAGTGGGTAATCCTCGGGAAATTGGCATTGCG
rh. 56-C	622	GGCGACCAATGGCAGACAATAACGAGGGTGCCGATGGAGTGGGTAATCCTCAGGAAATTGGCATTGCG
hu. 9-C	622	GGCGACCAATGGCAGACAATAACGAGGGTGCCGATGGAGTGGGTAATCCTCAGGAAATTGGCATTGCG
hu. 54-C	622	GGCGACCAATGGCAGACAATAACGAGGGTGCCGATGGAGTGGGTAATCCTCAGGAAATTGGCATTGCG
hu. 53-C	622	GGCGACCAATGGCAGACAATAACGAGGGTGCCGATGGAGTGGGTAATCCTCAGGAAATTGGCATTGCG
hu. 60-C	622	GGCGACCAATGGCAGACAATAACGAGGGTGCCGATGGAGTGGGTAATCCTCAGGAAATTGGCATTGCG
hu. 55-C	622	GGCGACCAATGGCAGACAATAACGAGGGTGCCGATGGAGTGGGTAATCCTCAGGAAATTGGCATTGCG
hu. 2-C	622	GGCGACCAATGGCAGACAATAACGAGGGTGCCGATGGAGTGGGTAATCCTCAGGAAATTGGCATTGCG
hu. 1-C	622	GGCGACCAATGGCAGACAATAACGAGGGTGCCGATGGAGTGGGTAATCCTCAGGAAATTGGCATTGCG
hu. 18-C	622	GGCGACCAATGGCAGACAATAACGAGGGTGCCGATGGAGTGGGTAATCCTCAGGAAATTGGCATTGCG
hu. 3-C	625	GGCGACCAATGGCAGACAATAACGAGGGTGCCGATGGAGTGGGTAATCCTCAGGAAATTGGCATTGCG
hu. 25-C	622	GGCGACCAATGGCAGACAATAACGAGGGTGCCGATGGAGTGGGTAATCCTCAGGAAATTGGCATTGCG
hu. 15-C	622	GGCGACCAATGGCAGACAATAACGAGGGTGCCGATGGAGTGGGTAATCCTCAGGAAATTGGCATTGCG
hu. 16-C	622	GGCGACCAATGGCAGACAATAACGAGGGTGCCGATGGAGTGGGTAATCCTCAGGAAATTGGCATTGCG
hu. 11-C	622	GGCGACCAATGGCAGACAATAACGAGGGTGCCGATGGAGTGGGTAATCCTCAGGAAATTGGCATTGCG
hu. 10-C	622	GGCGACCAATGGCAGACAATAACGAGGGTGCCGATGGAGTGGGTAATCCTCAGGAAATTGGCATTGCG
hu. 4-C	622	GGCGACCAATGGCAGACAATAACGAGGGTGCCGATGGAGTGGGTAATCCTCAGGAAATTGGCATTGCG
rh. 54-D	625	GGCGTCCAATGGCAGACAATAACGAGGGTGCCGATGGAGTGGGTAATCCTCAGGAAATTGGCATTGCG
rh. 48-D	625	GGCGACCAATGGTGAACAATAACAAGGGCGCCGACGGAGTGGGTAATGCCCTCAGGAAATTGGCATTGCG
rh. 55-D	625	GGCGACCAATGGCAGACAATAACGAGGGTGCCGACGGAGTGGGTAATGCCCTCAGGAAATTGGCATTGCG
rh. 62-D	625	GGCGACCAATGGTGAACAATAACAAGGGCGCCGACGGAGTGGGTAATGCCCTCAGGAAATTGGCATTGCG
AAV7-D	625	GGCGACCAATGGCAGACAATAACGAGGGTGCCGACGGAGTGGGTAATGCCCTCAGGAAATTGGCATTGCG
rh. 52-E	625	GGCGACCAATGGCAGACAATAACGAGGGTGCCGACGGAGTGGGTAATGCCCTCAGGAAATTGGCATTGCG
rh. 51-E	625	GGCGACCAATGGCAGACAATAACGAGGGTGCCGACGGAGTGGGTAATGCCCTCAGGAAATTGGCATTGCG
hu. 39-E	625	GGCGACCAATGGCAGACAATAACGAGGGTGCCGACGGAGTGGGTAATGCCCTCAGGAAATTGGCATTGCG
rh. 53-E	625	GGCGACCAATGGCAGACAATAACGAGGGTGCCGACGGAGTGGGTAATGCCCTCAGGAAATTGGCATTGCG
hu. 37-E	625	GGCGTCCAATGGCAGACAATAACGAGGGCGCCGACGGAGTGGGTAATGCCCTCAGGAAATTGGCATTGCG
rh. 43-E	622	GGCGACCAATGGCAGACAATAACGAGGGCGCCGACGGAGTGGGTAATGCCCTCAGGAAATTGGCATTGCG

FIG. 3AA



60/125

rh. 50-E	625	GGCGACCAATGGCAGACAATAACGAAGGTGCCGACGGAGTGGGTAGTTCCTCGGGAAATTGGCATTTGCG	710	720	730	740	750	760	770
rh. 49-E	625	GGCGACCAATGGCAGACAATAACGAAGGTGCCGACGGAGTGGGTAGTTCCTCGGGAAATTGGCATTTGCG	.... .... .... .... .... .... .... .... .... ....						
rh. 61-E	625	GGCGACCAATGGCAGACAATAACGAAGGTGCCGACGGAGTGGGTAGTTCCTCGGGAAATTGGCATTTGCG	ATTCACGTGGATGGGGACAGAGTCGTACCAAGTCCACCCGAACTGGGTGCTGCCCAGCTACAACAA						
hu. 41-E	625	GGCGTCCAATGGCAGACAATAACGAAGGCGCCGACGGAGTGGGTAGTTCCTCAGGAAATTGGCATTTGCG	ATCCCAATGGCTGGCGACAGAGTCATCACCAACAGCACCAAGAACCTGGGCCCTGCCCACTACAACAA						
rh. 64-E	625	GGCGACCAATGGCAGACAATAACGAAGGTGCCGACGGAGTGGGTAGTTCCTCAGGAAATTGGCATTTGCG	ATCCACCTGGTCTGAGGGCCACGTACGACACCAAGCACCAAGAACCTGGGTCTTGGCCACCTACAACAA						
hu. 42-E	625	GGCGTCCAATGGCAGACAATAACGAAGGCGCCGACGGAGTGGGTAGTTCCTCAGGAAATTGGCATTTGCG	ATCCACATGGCTGGCGACAGAGTCATCACCAACAGCACCCGACCTGGGCCTTGGCCACCTACAATAA						
rh. 57-E	625	GGCGGCCAATGGCAGACAATAACGAAGGTGCCGACGGAGTGGGTAGTTCCTCAGGAAATTGGCATTTGCG	ATCCACATGGCTGGCGACAGAGTCATCACCAACAGCACCCGACCTGGGCCTTGGCCACCTACAATAA						
hu. 40-E	625	GGCGTCCAATGGCAGACAATAACGAAGGCGCCGACGGAGTGGGTAGTTCCTCAGGAAATTGGCATTTGCG	ATCCACATGGCTGGCGACAGAGTCATCACCAACAGCACCCGACCTGGGCCTTGGCCACCTACAATAA						
AAV8-E	625	GGCGACCAATGGCAGACAATAACGAAGGCGCCGACGGAGTGGGTAGTTCCTCAGGAAATTGGCATTTGCG	ATCCACATGGCTGGCGACAGAGTCATCACCAACAGCACCCGACCTGGGCCTTGGCCACCTACAATAA						
rh. 58-E	625	GGCGACCAATGGCAGACAATAACGAAGGTGCCGACGGAGTGGGTAGTTCCTCAGGAAATTGGCATTTGCG							
rh. 40-E	625	GGCGTCCAATGGCAGACAATAACGAAGGCGCCGACGGAGTGGGTAGTTCCTCAGGAAATTGGCATTTGCG							
hu. 67-E	625	GGCGTCCAATGGCAGACAATAACGAAGGCGCCGACGGAGTGGGTAGTTCCTCAGGAAATTGGCATTTGCG							
hu. 17-E	625	GGCGTCCAATGGCAGACAATAACGAAGGCGCCGACGGAGTGGGTAGTTCCTCAGGAAATTGGCATTTGCG							
hu. 6-E	625	GGCGTCCAATGGCAGACAATAACGAAGGCGCCGACGGAGTGGGTAGTTCCTCAGGAAATTGGCATTTGCG							
hu. 66-E	625	GGCGTCCAATGGCAGACAATAACGAAGGCGCCGACGGAGTGGGTAGTTCCTCAGGAAATTGGCATTTGCG							
rh. 38-E	625	GGCGTCCAATGGCAGACAATAACGAAGGCGCCGACGGAGTGGGTAGTTCCTCAGGAAATTGGCATTTGCG							
hu. 32-F	622	GGCGACCAATGGCAGACAATAACGAAGGTGCCGATGGAGTGGGTAGTTCCTCGGGAAATTGGCATTTGCG							
AAV9/hu	622	GGCGACCAATGGCAGACAATAACGAAGGTGCCGATGGAGTGGGTAGTTCCTCGGGAAATTGGCATTTGCG							
hu. 31-F	622	GGCGACCAATGGCAGACAATAACGAAGGTGCCGATGGAGTGGGTAGTTCCTCGGGAAATTGGCATTTGCG							
AAV5	662	ATTCACGTGGATGGGGACAGAGTCGTACCAAGTCCACCCGAACTGGGTGCTGCCCAGCTACAACAA							
AAV3-3	692	ATTCACATGGCTGGCGACAGAGTCATCACCAACAGCACCAAGAACCTGGGCCTTGGCCACCTACAACAA							
AAV4-4	674	ATTCACCTGGTCTGAGGGCCACGTACGACACCAAGCACCAAGAACCTGGGTCTTGGCCACCTACAACAA							
AAV1-A	692	ATTCACATGGCTGGCGACAGAGTCATCACCAACAGCACCCGACCTGGGCCTTGGCCACCTACAATAA							
hu. 46-A	692	ATTCACATGGCTGGCGACAGAGTCATCACCAACAGCACCCGACCTGGGCCTTGGCCACCTACAATAA							
hu. 48-A	692	ATTCACATGGCTGGCGACAGAGTCATCACCAACAGCACCCGACCTGGGCCTTGGCCACCTACAATAA							
hu. 44-A	692	ATTCACATGGCTGGCGACAGAGTCATCACCAACAGCACCCGACCTGGGCCTTGGCCACCTACAATAA							
hu. 43-A	695	ATTCACATGGCTGGCGACAGAGTCATCACCAACAGCACCCGACCTGGGCCTTGGCCACCTACAATAA							

FIG. 3AB



AAV6-A	692	ATTCACATGGCTGGCGACAGAGTCA	TACCACCAGCACCCGGAACATGGGCCTTGCCCCACCTATAACAA
hu.34-B	692	ATTCACATGGATGGCGACAGAGTCA	TACCACCAGCACCCGGAACCTGGGCCCTGGCCACCTACAACAA
hu.47-B	692	ATTCACATGGATGGCGACAGAGTCA	TACCACCAGCACCCGGAACCTGGGCCCTGGCCACCTACAACAA
hu.29-B	692	ATTCACATGGATGGCGACAGAGTCA	TACCACCAGCACCCGGAACCTGGGCCCTGGCCACCTACAACAA
hu.63-B	692	ATTCACATGGATGGCGACAGAGTCA	TACCACCAGCACCCGGAACCTGGGCCTGCTGCCCACCTACAACAA
hu.56-B	692	ATTCACATGGATGGCGACAGAGTCA	TACCACCAGCACCCGGAACCTGGGCCCTGGCCACCTACAACAA
hu.45-B	692	ATTCACATGGATGGCGACAGAGTCA	TACCACCAGCACCCGGAACCTGGGCCCTGGCCACCTACAACAA
hu.57-B	689	ATTCACATGGATGGCGACAGAGTCA	TACCACCAGCACCCGGAACCTGGGCCCTGGCCACCTACAACAA
hu.35-B	692	ATTCACATGGATGGCGACAGAGTCA	TACCACCAGCACCCGGAACCTGGGCCCTGGCCACCTACAACAA
hu.58-B	692	ATTCACATGGATGGCGACAGAGTCA	TACCACCAGCACCCGGAACCTGGGCCTGCTGCCCACCTACAACAA
hu.28-B	692	ATTCACATGGATGGCGACAGAGTCA	TACCACCAGCACCCGGAACCTGGGCCCTGGCCACCTACAACAA
hu.51-B	692	ATTCACATGGATGGCGACAGAGTCA	TACCACCAGCACCCGGAACCTGGGCCCTGGCCACCTACAACAA
hu.19-B	692	ATTCACATGGATGGCGACAGAGTCA	TACCACCAGCACCCGGAACCTGGGCCCTGGCCACCTACAACAA
hu.49-B	692	ATTCACATGGATGGCGACAGAGTCA	TACCACCAGCACCCGGAACCTGGGCCTGCTGCCCACCTACAACAA
hu.52-B	692	ATTCACATGGATGGCGACAGAGTCA	TACCACCAGCACCCGGAACCTGGGCCCTGGCCACCTACAACAA
hu.13-B	692	ATTCACATGGATGGCGACAGAGTCA	TACCACCAGCACCCGGAACCTGGGCCCTGGCCACCTACAACAA
AAV2-B	692	ATTCACATGGATGGCGACAGAGTCA	TACCACCAGCACCCGGAACCTGGGCCCTGGCCACCTACAACAA
hu.20-B	692	ATTCACATGGATGGCGACAGAGTCA	TACCACCAGCACCCGGAACCTGGGCCCTGGCCACCTACAACAA
hu.24-B	692	ATTCACATGGATGGCGACAGAGTCA	TACCACCAGCACCCGGAACCTGGGCCCTGGCCACCTACAACAA
hu.64-B	692	ATTCACATGGATGGCGACAGAGTCA	TACCACCAGCACCCGGAACCTGGGCCTGCTGCCCACCTACAACAA
hu.27-B	692	ATTCACATGGATGGCGACAGAGTCA	TACCACCAGCACCCGGAACCTGGGCCCTGGCCACCTACAACAA
hu.21-B	692	ATTCACATGGATGGCGACAGAGTCA	TACCACCAGCACCCGGAACCTGGGCCCTGGCCACCTACAACAA
hu.22-B	692	ATTCACATGGATGGCGACAGAGTCA	TACCACCAGCACCCGGAACCTGGGCCCTGGCCACCTACAACAA
hu.23-B	692	ATTCACATGGATGGCGACAGAGTCA	TACCACCAGCACCCGGAACCTGGGCCCTGGCCACCTGCAACAA
hu.7-C	692	ATTCACATGGATGGCGACAGAGTCA	TACCACCAGCACCCGGAACCTGGGCCCTGGCCACCTACAACAA
hu.61-C	692	ATTCACATGGATGGCGACAGAGTCA	TACCACCAGCACCCGGAACCTGGGCCCTGGCCACCTACAACAA
rh.56-C	692	ATTCACATGGATGGCGACAGAGTCA	TACCACCAGCACCCGGAACCTGGGCCCTGGCCACCTACAACAA
hu.9-C	692	ATTCACATGGATGGCGACAGAGTCA	TACCACCAGCACCCGGAACCTGGGCCCTGGCCACCTACAACAA
hu.54-C	692	ATTCACATGGATGGCGACAGAGTCA	TACCACCAGCACCCGGAACCTGGGCCCTGGCCACCTACAACAA
hu.53-C	692	ATTCACATGGATGGCGACAGAGTCA	TACCACCAGCACCCGGAACCTGGGCCCTGGCCACCTACAACAA

FIG. 3AC

hu. 60-C	692	ATCCCCAATGGCTGGCGACAGAGTCATCACCAACAGCACCCGACCTGGGCCCCCTGCCCCACCTACAACAA
hu. 55-C	692	ATCCCCAATGGCTGGCGACAGAGTCATCACCAACAGCACCCGAAACCTGGGCCCCCTGCCCCACCTACAACAA
hu. 2-C	692	ATCCCCAATGGCTGGCGACAGAGTCATCACCAACAGCACCCGAAACCTGGGCCCCCTGCCCCACATACAACAA
hu. 1-C	692	ATCCCCAATGGCTGGCGACAGAGTCATCACCAACAGCACCCGAAACCTGGGCCCCCTGCCCCACATACAACAA
hu. 18-C	692	ATCCCCAATGGCTGGCGACAGAGTCATCACCAACAGCACCCGAAACCTGGGCCCCCTGCCCCACCTACAACAA
hu. 3-C	695	ATCCCCAATGGCTGGACGACAGAGTCATCGCCACAGCACCCGAAACCTGGGCCCCCTGCCCCACATACAACAA
hu. 25-C	692	ATCCCCAATGGCTGGCGACAGAGTCATCACCAACAGCACCTCGAACCTGGGCCCCCTGCCCCACCTACAACAA
hu. 15-C	692	ATCCCCAATGGCTGGCGACAGAGTCATCACCAACAGCACCCGAAACCTGGGCTCTGCCCCACCTACAATAA
hu. 16-C	692	ATCCCCAATGGCTGGCGACAGAGTCATCACCAACAGCACCCGAAACCTGGGCTCTGCCCCACCTACAACAA
hu. 11-C	692	ATCCCCAATGGCTGGCGACAGAGTCATCACCAACAGCACCCGAAACCTGGGCCCCCTGCCCCACCTACAACAA
hu. 10-C	692	ATCCCCAATGGCTGGCGACAGAGTCATCACCAACAGCACCCGAAACCTGGGCCCCCTGCCCCACCTACAACAA
hu. 4-C	692	ATCCCCAATGGCTGGCGACAGAGTCATCACCAACAGCACCCGAAACCTGGGCTTTGCCCCACCTACAACAA
rh. 54-D	695	ATCCACATGGCTGGCGACAGAGTCATCACCAACAGCACCCGAAACCTGGGCTTTGCCCCACCTACAACAA
rh. 48-D	695	ATCCACATGGCTGGCGACAGAGTCATCACCAACAGCACCCGAAACCTGGGCTTTGCCCCACCTACAACAA
rh. 55-D	695	ATCCACACGGCTGGCGACAGAGTCATCACCAACAGCACCCGAAACCTGGGCTTTGCCCCACCTACAACAA
rh. 62-D	695	ATCCACATGGCTGGCGACAGAGTCATCACCAACAGCACCCGAAACCTGGGCTTTGCCCCACCTACAACAA
AAV7-D	695	ATCCACATGGCTGGCGACAGAGTCATCACCAACAGCACCCGAAACCTGGGCCCCCTGCCCCACCTACAACAA
rh. 52-E	695	ATCCACATGGCTGGCGACAGAGTCATCACCAACAGCACCCGAAACCTGGGCCCCCTGCCCCACCTACAACAA
rh. 51-E	695	ATCCACATGGCTGGCGACAGAGTCATCACCAACAGCACCCGAAACCTGGGCCCCCTGCCCCACCTACAACAA
hu. 39-E	695	ATCCACATGGCTGGCGACAGAGTCATCACCAACAGCACCCGAAACCTGGGCCCCCTGCCCCACCTACAACAA
rh. 53-E	695	ATCCACATGGCTGGCGACAGAGTCATCACCAACAGCACCCGAAACCTGGGCCCCCTGCCCCACCTACAACAA
hu. 37-E	695	ATCCACATGGCTGGCGACAGAGTCATCACCAACAGCACCCGAAACCTGGGCCCCCTGCCCCACCTACAACAA
rh. 43-E	692	ATCCACATGGCTGGCGACAGAGTCATCACCAACAGCACCCGAAACCTGGGCCCCCTGCCCCACCTACAACAA
rh. 50-E	695	ATCCACATGGCTGGCGACAGAGTCATCACCAACAGCACCCGAAACCTGGGCCCCCTGCCCCACCTACAACAA
rh. 49-E	695	ATCCACATGGCTGGCGACAGAGTCATCACCAACAGCACCCGAAACCTGGGCCCCCTGCCCCACCTACAACAA
rh. 61-E	695	ATCCACATGGCTGGCGACAGAGTCATCACCAACAGCACCCGAAACCTGGGCCCCCTGCCCCACCTACAACAA
hu. 41-E	695	ATCCACATGGCTGGCGACAGAGTCATCACCAACAGCACCCGAAACCTGGGCCCCCTGCCCCACCTACAACAA
rh. 64-E	695	ATCCACATGGCTGGCGACAGAGTCATCACCAACAGCACCCGAAACCTGGGCCCCCTGCCCCACCTACAACAA
hu. 42-E	695	ATCCACATGGCTGGCGACAGAGTCATCACCAACAGCACCCGAAACCTGGGCCCCCTGCCCCACCTACAACAA
rh. 57-E	695	ATCCACATGGCTGGCGACAGAGTCATCACCAACAGCACCCGAAACCTGGGCCCCCTGCCCCACCTACAACAA

FIG. 3AD

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hu.40-E	695	ATTCCACATGGCTGGCGGACAGAGTCATCACCACCAGCACCCCGAACCCTGGGGCCCTGCCACCTACAACAA	780	790	800	810	820	830	840
AAV8-E	695	ATTCCACATGGCTGGCGGACAGAGTCATCACCACCAGCACCCCGAACCCTGGGGCCCTGCCACCTACAACAA	..... ..... ..... ..... ..... ..... ..... ..... ..... .....						
rh.58-E	695	ATTCCACATGGCTGGCGGACAGAGTCATCACCACCAGCACCCCGAACCCTGGGGCCCTGCCACCTACAACAA							
rh.40-E	695	ATTCCACATGGCTGGCGGACAGAGTCATCACCACCAGCACCCCGAACCCTGGGGCCCTGCCACCTACAACAA							
hu.67-E	695	ATTCCACATGGCTGGCGGACAGAGTCATCACCACCAGCACCCCGAACCCTGGGGCCCTGCCACCTACAACAA							
hu.17-E	695	ATTCCACATGGCTGGCGGACAGAGTCATCACCACCAGCACCCCGAACCCTGGGGCCCTGCCACCTACAACAA							
hu.6-E	695	ATTCCGATGGCTGGCGGACAGAGTCATCACCACCAGCACCCCGAACCCTGGGGCCCTGCCACCTACAACAA							
hu.66-E	695	ATTCCACATGGCTGGCGGACAGAGTCATCACCACCAGCACCCCGAACCCTGGGGCCCTGCCACCTACAACAA							
rh.38-E	695	ATTCCACATGGCTGGCGGACAGAGTCATCACCACCAGCACCCCGAACCCTGGGGCCCTGCCACCTACAACAA							
hu.32-F	692	ATCCCAATGGCTGGGGACAGAGTCATCACCACCAGCACCCCGAACCCTGGGGCCCTGCCACCTACAACAA							
AAV9/hu	692	ATCCCAATGGCTGGGGACAGAGTCATCACCACCAGCACCCCGAACCCTGGGGCCCTGCCACCTACAACAA							
hu.31-F	692	ATCCCAATGGCTGGGGACAGAGTCATCACCACCAGCACCCCGAACCCTGGGGCCCTGCCACCTACAACAA							
AAV5	732	CCACCAGTACCGAGAGATCAAAAGC---GGTCCGTGACGGAGCAACGCCAACGCGCTACTTTGGATAC							
AAV3-3	762	CCATCTCTACAAGCAAATCTCC-----AGCCAATCAGGAGCTTCAAACGACAACCACTACTTTGGCTAC							
AAV4-4	744	CCACCTCTACAAGCGACTCGGA-----GAGAGCCTGCAGTCCAACACCTACACGGGATTC							
AAV1-A	762	CCACCTCTACAAGCAAATCTCCAGT---GCTTCAACGGGGCCAGCAACGACAACCACTACTTCGGCTAC							
hu.46-A	762	CCACCTCTACAAGCAAATCTCCAGT---GCTTCAACGGGGCCAGCAACGACAACCACTACTTCGGCTAC							
hu.48-A	762	CCACCTCTACAAGCAAATCTCCAGT---ACTTCAACGGGGCCAGCAACGACAACCACTACTTCGGCTAC							
hu.44-A	762	CCACCTCTACAAGCAAATCTCCAGT---GCTTCAACGGGGCCAGCAACGACAACCACTACTTCGGCTAC							
hu.43-A	765	CCACCTCTACAAGCAAATCTCCAGT---GCTTCAACGGGGCCAGCAACGACAACCACTACTTCGGCTAC							
AAV6-A	762	CCACCTCTACAAGCAAATCTCCAGT---GCTTCAACGGGGCCAGCAACGACAACCACTACTTCGGCTAC							
hu.34-B	762	CCACCTCTACAAGCAAATTTCC-----AGCCAATCAGGAGCCTCGAACGACAATCACTACTTTGGCTAC							
hu.47-B	762	CCACCTCTACAAGCAAATTTCC-----AGCCAATCAGGAGCCTCGAACGACAATCACTACTTTGGCTAC							
hu.29-B	762	CCATCTGTACAAGCAAATATCC-----AGCCAGTCTGGAGCCAGCAACGACAATCACTACTTTGGCTAC							
hu.63-B	762	CCACCTCTACAAGCAGATTTCC-----AGCCAATCAGGAGCCTCAAACGACAACCACTACTTTGGCTAC							
hu.56-B	762	CCACCTCTACAAGCAGATTTCC-----AGCCAATCAGGAGCCAGCAACGACAACCACTACTTTGGCTAC							
hu.45-B	762	CCACCTCTACAAGCAAATTTCC-----AGCCAATCAGGAGCCTCGAACGACAATCACTACTTTGGCTAC							

FIG. 3AE

hu.57-B	759	CCACCTCTACAAGCAGATTTC	-----AGCCAATCAGGAGCCAGCAATGACAACCACTACTTTGGCTAC
hu.35-B	762	CCACCTCTACAAACAAATTTC	-----AGCCAATCAGGAGCCTCGAACGACAATCACTACTTTGGCTAC
hu.58-B	762	CCATCTGTACAAGCAGATTTC	-----AGCCAATCAGGAGCCAGCAACGACAACCACTACTTTGGCTAC
hu.28-B	762	CCATCTGTACAAGCAAAATATC	-----AGCCAGTCTGGAGCCAGCAACGACAATCACTACTTTGGCTAC
hu.51-B	762	CCACCTCTACAAACAAATTTC	-----AGCCAATCAGGAGCCTCGAACGACAATCACTACTTTGGCTAC
hu.19-B	762	CCATCTGTACAAGCAAAATCTC	-----AGCCAGTCTGGAGCCAGCAACGACAACCACTACTTTGGCTAC
hu.49-B	762	CCATCTGTACAAGCAGATCTC	-----AGCCAATCAGGAGCCAGCAACGACAACCACTACTTTGGCTAC
hu.52-B	762	CCACCTCTACAGACAAATTTCC	-----AGCCAATCAGGAGCCTCGAACGACAATCACTACTTTGGCTAC
hu.13-B	762	CCATCTCTACAAGCAAAATCTC	-----AGCCAATCAGGAGCCAGCAACGACAACCACTACTTTGGCTAC
AAV2-B	762	CCACCTCTACAAACAAATTTC	-----AGCCAATCAGGAGCCTCGAACGACAATCACTACTTTGGCTAC
hu.20-B	762	CCATCTGTACAAGCAAAATCTC	-----AGCCAGTCTGGAGCCAGCAACGACAACCACTACTTTGGCTAC
hu.24-B	762	CCATCTGTACAAGCAAAATCTC	-----AGCCAGTCTGGAGCCAGCAACGACAACCACTACTTTGGCTAC
hu.64-B	762	CCACCTCTACAGGCAGATTTC	-----AGCCAATCAGGAGCCTCAAACGACAACCACTACTTTGGCTAC
hu.27-B	762	CCATCTGTACAAGCAAAATCTC	-----AGCCAGTCTGGAGCCAGCAACGACAACCACTACTTTGGCTAC
hu.21-B	762	CCATCTGTACAAGCAAAATCTC	-----AGCCAGTCTGGAGCCAGCAACGACAACCACTACTTTGGCTAC
hu.22-B	762	CCATCTGTACAAGCAAAATCTC	-----AGCCAGTCTGGAGCCAGCAACGACAACCACTACTTTGGCTAC
hu.23-B	762	CCATCTGTACAAGCAAAATCTC	-----AGCCAGTCTGGAGCCAGCAACGACAACCACTACTTTGGCTAC
hu.7-C	762	CCACCTCTACAAGCAAAATCTCA	-----AGCCAATCAGGAGCCTCAAACGACAACCACTACTTTGGCTAC
hu.61-C	762	CCACCTCTACAAGCAAAATCTCC	-----AGCCAATCAGGAGCCTCAAACGACAACCACTACTTTGGCTAC
rh.56-C	762	CCACCTCTACAAGCAAAATCTCA	-----AGCCAATCAGGAGCCTCAAACGACAACCACTACTTTGGCTAC
hu.9-C	762	CCACCTCTACAAGCAAAATCTCC	-----AGCCAATCAGGAGCCTCGAACGACAACCACTACTTTGGCTGC
hu.54-C	762	CCACCTTTACAAGCAAAATCTCC	-----AGCCAATCAGGAGCCTCAAACGACAACCACTACTTTGGCTAC
hu.53-C	762	CCACCTTTACAAGCAAAATCTCC	-----AGCCAATCAGGAGCCTCAAACGACAACCACTACTTTGGCTAC
hu.60-C	762	CCACCTCTACAAGCAAAATCTCC	-----AGCCAATCAGGAGCCTCAAACGACAACCACTACTTTGGCTAC
hu.55-C	762	CCACCTTTACAAGCAAAATCTCC	-----AGCCAATCAGGAGCCTCAAACGACAACCACTACTTTGGCTAC
hu.2-C	762	CCACCTCTACAAGCAAAATCTCC	-----AGCCAATCAGGAGCCAGCAACGACAACCACTACTTTGGCTAC
hu.1-C	762	CCACCTCTACAAGCAAAATCTCC	-----AGCCAATCAGGAGCCAGCAACGACAACCACTACTTTGGCTAC
hu.18-C	762	CCACCTCTACAAGCAAAATCTCC	-----AGCCAATCAGGAGCCTCAAACGACAACCACTACTTTGGCTAC
hu.3-C	765	CCACCTCTACAAGCAAAATCTCC	-----AGCCAATCAGGAGCCTCGAACGACAACCACTACTTTGGCTAC
hu.25-C	762	CCACCTCTACAAGCAAAATCTCC	-----AGCCAATCAGGAGCCTCAAACGACAACCACTACTTTGGCTAC

FIG. 3AF

hu.15-C	762	CCACCTCTACAAGCAAATCTCC-----AGCCAAATCAGGAGCCTCAAACGACAACCACTACTTTGGCTAC
hu.16-C	762	CCACCTCTACAAGCAAATCTCC-----AGCCAAATCAGGAGCCTCAAACGACAACCACTACTTTGGCTAC
hu.11-C	762	CCACCTCTACAAGCAAATCTCC-----AGCCAAATCAGGAGCCTCGAACGACAACCACTACTTTGGCTAC
hu.10-C	762	CCACCTCTACAAGCAAATCTCC-----AGCCAAATCAGGAGCCTCGAACGACAACCACTACTTTGGCTAC
hu.4-C	762	CCACCTCTACAAGCAAATCTCC-----AGCCAAATCAGGAGCCTCGAACGACAACCACTACTTTGGCTAC
rh.54-D	765	CCACCTCTACAAGCAAATCTCCAGT---CAGTCAGCAGGTAGCACCACGACAACGTCCTACTTTCGGCTAC
rh.48-D	765	CCACCTCTACAAGCAAATCTCCAGT---CAGTCAGCAGGTAGCACCACGACAACGTCCTACTTTCGGCTAC
rh.55-D	765	CCACCTCTACAAGCAAATCTCCAGT---CAGTCAGCAGGTAGCACCACGACAACGTCCTACTTTCGGCTAC
rh.62-D	765	CCACCTCTACAAGCAAATCTCCAGT---CAGTCAGCAGGTAGCACCACGACAACGTCCTACTTTCGGCTAC
AAV7-D	765	CCACCTCTACAAGCAAATCTCCAGT---GAACTGCAGGTAGTACCAACGACAACCACTACTTTCGGCTAC
rh.52-E	765	CCACCTCTACAAGCAAATCTCCAACGGGACCTCGGGAGGCGAGCACCACGACAACCACTACTTTCGGCTAC
rh.51-E	765	CCACCTCTACAAGCAAATCTCCAACGGGACCTCGGGAGGCGAGCACCACGACAACCACTACTTTCGGCTAC
hu.39-E	765	CCACCTCTACAAGCAAATCTCCAACGGGACCTCGGGAGGCGAGCACCACGACAACCACTACTTTCGGCTAC
rh.53-E	765	CCACCTCTACAAGCAAATCTCCAATGGGACATCGGGAGGAAAGCACCACGACAACCACTACTTTCGGCTAC
hu.37-E	765	CCACCTCTACAAGCAAATCTCCAACGGGACATCGGGAGGAGCCACCAACGACAACCACTACTTTCGGCTAC
rh.43-E	762	CCACCTCTACAAGCAAATCTCCAACGGGACATCGGGAGGAGCCACCAACGACAACCACTACTTTCGGCTAC
rh.50-E	765	CCACCTCTACAAGCAAATCTCCAACGGGACCTCGGGAGGCGAGCACCACGACAACCACTACTTTCGGCTAC
rh.49-E	765	CCACCTCTACAAGCAAATCTCCAACGGGACCTCGGGAGGCGAGCACCACGACAACCACTACTTTCGGCTAC
rh.61-E	765	CCACCTCTACAAGCAAATCTCCAACGGGACCTCGGGAGGCGAGCACCACGACAACCACTACTTTCGGCTAC
hu.41-E	765	CCACCTCTACAAGCAAATATCCAATGGGACATCGGGAGGAAAGCACCACGACAACCACTACTTTCGGCTAC
rh.64-E	765	CCACCTCTACAAGCAAATCTCCAACGGGACCTCGGGAGGCGAGCACCACGACAACCACTACTTTCGGCTAC
hu.42-E	765	CCACCTCTACAAGCAAATATCCAATGGGACATCGGGAGGAAAGCACCACGACAACCACTACTTTCGGCTAC
rh.57-E	765	CCACCTCTACAAGCAAACCTCCAACGGGACCTCGGGAGGCGAGCACCACGACAACCACTACTTTCGGCTAC
hu.40-E	765	CCACCTCTACAAGCAAATATCCAATGGGACATCGGGAGGAAAGCACCACGACAACCACTACTTTCGGCTAC
AAV8-E	765	CCACCTCTACAAGCAAATCTCCAACGGGACCTCGGGAGGCGAGCACCACGACAACCACTACTTTCGGCTAC
rh.58-E	765	CCACCTCTACAAGCAAATCTCCAACGGGACCTCGGGAGGCGAGCACCACGACAACCACTACTTTCGGCTAC
rh.40-E	765	CCACCTCTACAAGCAAATATCCAATGGGACATCGGGAGGAAAGCACCACGACAACCACTACTTTCGGCTAC
hu.67-E	765	CCACCTCTACAAGCAAATATCCAATGGGACATCGGGAGGAAAGCACCACGACAACCACTACTTTCGGCTAC
hu.17-E	765	CCACCTCTACAAGCAAATCTCCAACGGGACATCGGGAGGAAAGCACCACGACAACCACTACTTTCGGCTAC
hu.6-E	765	CCACCTCTACAAGCAAATCTCCAACGGGACATCGGGAGGAAAGCACCACGACAACCACTACTTTCGGCTAC

FIG. 3AG

hu.66-E	765	CCACCTCTACAAGCAAATATCCAATGGGACATCGGGAGGAAGCACCACCAACGACACACCTACTTCGGCTAC	850	860	870	880	890	900	910
rh.38-E	765	CCACCTCTACAAGCAAATATCCAATGGGACATCGGGAGGAAGCACCACCAACGACACACCTACTTCGGCTAC							
hu.32-F	762	TCACCTCTACAAGCAAATCTCCAACAGCACATCTGGAGGATCTTCAAATGACAACGCCCTACTTCGGCTAC							
AAV9/hu	762	TCACCTCTACAAGCAAATCTCCAACAGCACATCTGGAGGATCTTCAAATGACAACGCCCTACTTCGGCTAC							
hu.31-F	762	TCACCTCTACAAGCAAATCTCCAACAGCACATCTGGAGGATCTTCAAATGACAACGCCCTACTTCGGCTAC							
AAV5	799	.... .... .... .... .... .... .... .... .... .... .... .... .... .... ....							
AAV3-3	826	AGCACCCCTTGGGGTACTTTGACTTTAACCGCTTCCACAGCCACTGGAGCCCCCGAGACTGGCAAAGAC							
AAV4-4	799	AGCACCCCTTGGGGTATTTTGAATTAACAGATTCCACTGCCACTTCTCACCACGTGACTGGCAGCGAC							
AAV1-A	829	TCCACCCCTTGGGGTACTTTGACTTCAACCGCTTCCACTGCCACTTCTCACCACGTGACTGGCAGCGAC							
hu.46-A	829	AGCACCCCTTGGGGTATTTTGAATTAACAGATTCCACTGCCACTTTTCAACACGTGACTGGCAGCGAC							
hu.48-A	829	AGCACCCCTTGGGGTATTTTGAATTAACAGATTCCACTGCCACTTTTCAACACGTGACTGGCAGCGAC							
hu.44-A	829	GGCACCCCTTGGGGTATTTTGAATTAACAGATTCCACTGCCACTTTTCAACACGTGACTGGCAGCGAC							
hu.43-A	832	AGCACCCCTTGGGGTATTTTGAATTAACAGATTCCACTGCCACTTTTCAACACGTGACTGGCAGCGAC							
AAV6-A	829	AGCACCCCTTGGGGTATTTTGAATTAACAGATTCCACTGCCACTTTTCAACACGTGACTGGCAGCGAC							
hu.34-B	826	AGCACCCCTTGGGGTATTTTGAATTAACAGATTCCACTGCCACTTTTCAACACGTGACTGGCAAAGAC							
hu.47-B	826	AGCACCCCTTGGGGTATTTTGAATTAACAGATTCCACTGCCACTTTTCAACACGTGACTGGCAAAGAC							
hu.29-B	826	AGCACCCCTTGGGGTATTTTGAATTAACAGATTCCACTGCCACTTTTCAACACGTGACTGGCAAAGAC							
hu.63-B	826	AGCACCCCTTGGGGTATTTTGAATTAACAGATTCCACTGCCACTTTTCAACACGTGACTGGCAAAGAC							
hu.56-B	826	AGCACCCCTTGGGGTATTTTGAATTAACAGATTCCACTGCCACTTTTCAACACGTGACTGGCAAAGAC							
hu.45-B	826	AGCACCCCTTGGGGTATTTTGAATTAACAGATTCCACTGCCACTTTTCAACACGTGACTGGCAAAGAC							
hu.57-B	823	AGCACCCCTTGGGGTATTTTGAATTAACAGATTCCACTGCCACTTTTCAACACGTGACTGGCAAAGAC							
hu.35-B	826	AGCACCCCTTGGGGTATTTTGAATTAACAGATTCCACTGCCACTTTTCAACACGTGACTGGCAAAGAC							
hu.58-B	826	AGCACCCCTTGGGGTATTTTGAATTAACAGATTCCACTGCCACTTTTCAACACGTGACTGGCAAAGAC							
hu.28-B	826	AGCACCCCTTGGGGTATTTTGAATTAACAGATTCCACTGCCACTTTTCAACACGTGACTGGCAAAGAC							
hu.51-B	826	AGCACCCCTTGGGGTATTTTGAATTAACAGATTCCACTGCCACTTTTCAACACGTGACTGGCAAAGAC							
hu.19-B	826	AGCACCCCTTGGGGTATTTTGAATTAACAGATTCCACTGCCACTTTTCAACACGTGACTGGCAAAGAC							
hu.49-B	826	AGCACCCCTTGGGGTATTTTGAATTAACAGATTCCACTGCCACTTTTCAACACGTGACTGGCAAAGAC							

FIG. 3AH

hu. 52-B	826	AGCACCCCTTGGGGGTATTTTGACTTCAACAGATTCCACTGCCACTTTTCAACCACGTGACTGGCAAAGAC
hu. 13-B	826	AGCACCCCTTGGGGGTATTTTGACTTCAACAGATTCCACTGCCACTTTTCAACCACGTGACTGGCAAAGAC
AAV2-B	826	AGCACCCCTTGGGGGTATTTTGACTTCAACAGATTCCACTGCCACTTTTCAACCACGTGACTGGCAAAGAC
hu. 20-B	826	AGCACCCCTTGGGGGTATTTTGACTTCAACAGATTCCACTGCCACTTTTCAACCACGTGACTGGCAAAGAC
hu. 24-B	826	AGCACCCCTTGGGGGTATTTTGACTTCAACAGATTCCACTGCCACTTTTCAACCACGTGACTGGCAAAGAC
hu. 64-B	826	AGCACCCCTTGGGGGTATTTTGACTTCAACAGATTCCACTGCCACTTTTCAACCACGTGACTGGCAAAGAC
hu. 27-B	826	AGCACCCCTTGGGGGTATTTTGACTTCAACAGATTCCACTGCCACTTTTCAACCACGTGACTGGCAAAGAC
hu. 21-B	826	AGCACCCCTTGGGGGTATTTTGACTTCAACAGATTCCACTGCCACTTTTCAACCACGTGACTGGCAAAGAC
hu. 22-B	826	AGCACCCCTTGGGGGTATTTTGACTTCAACAGATTCCACTGCCACTTTTCAACCACGTGACTGGCAAAGAC
hu. 23-B	826	AGCACCCCTTGGGGGTATTTTGACTTCAACAGATTCCACTGCCACTTTTCAACCACGTGACTGGCAAAGAC
hu. 7-C	826	AGCACCCCTTGGGGGTATTTTGACTTCAACAGATTCCACTGCCACTTTTCAACCACGTGACTGGCAAAGAC
hu. 61-C	826	AGCACCCCTTGGGGGTATTTTGACTTCAACAGATTCCACTGCCACTTTTCAACCACGTGACTGGCAAAGAC
rh. 56-C	826	AGCACCCCTTGGGGGTATTTTGACTTCAACAGATTCCACTGCCACTTTTCAACCACGTGACTGGCAAAGAC
hu. 9-C	826	AGCACCCCTTGGGGGTATTTTGACTTCAACAGATTCCACTGCCACTTTTCAACCACGTGACTGGCAAAGAC
hu. 54-C	826	AGCACCCCTTGGGGGTATTTTGACTTCAACAGATTCCACTGCCACTTTTCAACCACGTGACTGGCAAAGAC
hu. 53-C	826	AGCACCCCTTGGGGGTATTTTGACTTCAACAGATTCCACTGCCACTTTTCAACCACGTGACTGGCAAAGAC
hu. 60-C	826	AGCACCCCTTGGGGGTATTTTGACTTCAACAGATTCCACTGCCACTTTTCAACCACGTGACTGGCAAAGAC
hu. 55-C	826	AGCACCCCTTGGGGGTATTTTGACTTCAACAGATTCCACTGCCACTTTTCAACCACGTGACTGGCAAAGAC
hu. 2-C	826	AGCACCCCTTGGGGGTATTTTGACTTCAACAGATTCCACTGCCACTTTTCAACCACGTGACTGGCAAAGAC
hu. 1-C	826	AGCACCCCTTGGGGGTATTTTGACTTCAACAGATTCCACTGCCACTTTTCAACCACGTGACTGGCAAAGAC
hu. 18-C	826	AGCACCCCTTGGGGGTATTTTGACTTCAACAGATTCCACTGCCACTTTTCAACCACGTGACTGGCAAAGAC
hu. 3-C	829	AGCACCCCTTGGGGGTATTTTGACTTCAACAGATTCCACTGCCACTTTTCAACCACGTGACTGGCAAAGAC
hu. 25-C	826	AGCACCCCTTGGGGGTATTTTGACTTCAACAGATTCCACTGCCACTTTTCAACCACGTGACTGGCAAAGAC
hu. 15-C	826	AGCACCCCTTGGGGGTATTTTGACTTCAACAGATTCCACTGCCACTTTTCAACCACGTGACTGGCAAAGAC
hu. 16-C	826	AGCACCCCTTGGGGGTATTTTGACTTCAACAGATTCCACTGCCACTTTTCAACCACGTGACTGGCAAAGAC
hu. 11-C	826	AGCACCCCTTGGGGGTATTTTGACTTCAACAGATTCCACTGCCACTTTTCAACCACGTGACTGGCAAAGAC
hu. 10-C	826	AGCACCCCTTGGGGGTATTTTGACTTCAACAGATTCCACTGCCACTTTTCAACCACGTGACTGGCAAAGAC
hu. 4-C	826	AGCACCCCTTGGGGGTATTTTGACTTCAACAGATTCCACTGCCACTTTTCAACCACGTGACTGGCAAAGAC
rh. 54-D	832	AGCACCCCTTGGGGGTATTTTGACTTCAACAGATTCCACTGCCACTTTTCAACCACGTGACTGGCAAAGAC
rh. 48-D	832	AGCACCCCTTGGGGGTATTTTGACTTCAACAGATTCCACTGCCACTTTTCAACCACGTGACTGGCAAAGAC

FIG. 3A1



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rh. 55-D	832	AGACCCCCCTGGGGGTATTTTGACTTCAACAGATTCCACTGTCACTTCTCACCACGTGACTGGCAGCGGC	920	930	940	950	960	970	980
rh. 62-D	832	AGACCCCCCTGGGGGTATTTTGACTTCAACAGATTCCACTGTCACTTCTCACCACGTGACTGGCAGCGGC							
AAV7-D	832	AGACCCCCCTGGGGGTATTTTGACTTAAACAGATTCCACTGCCACTTCTCACCACGTGACTGGCAGCGAC							
rh. 52-E	835	AGACCCCCCTGGGGGTATTTTGACTTAAACAGATTCCACTGCCACTTCTCACCACGTGACTGGCAGCGAC							
rh. 51-E	835	AGACCCCCCTGGGGGTATTTTGACTTAAACAGATTCCACTGCCACTTCTCACCACGTGACTGGCAGCGAC							
hu. 39-E	835	AGACCCCCCTGGGGGTATTTTGACTTAAACAGATTCCACTGCCACTTCTCACCACGTGACTGGCAGCGAC							
rh. 53-E	835	AGACCCCCCTGGGGGTATTTTGACTTAAACAGATTCCACTGCCACTTCTCACCACGTGACTGGCAGCGAC							
hu. 37-E	835	AGACCCCCCTGGGGGTATTTTGACTTAAACAGATTCCACTGCCACTTCTCACCACGTGACTGGCAGCGAC							
rh. 43-E	832	AGACCCCCCTGGGGGTATTTTGACTTAAACAGATTCCACTGCCACTTCTCACCACGTGACTGGCAGCGAC							
rh. 50-E	835	AGACCCCCCTGGGGGTATTTTGACTTAAACAGATTCCACTGCCACTTCTCACCACGTGACTGGCAGCGAC							
rh. 49-E	835	AGACCCCCCTGGGGGTATTTTGACTTAAACAGATTCCACTGCCACTTCTCACCACGTGACTGGCAGCGAC							
rh. 61-E	835	AGACCCCCCTGGGGGTATTTTGACTTAAACAGATTCCACTGCCACTTCTCACCACGTGACTGGCAGCGAC							
hu. 41-E	835	AGACCCCCCTGGGGGTATTTTGACTTCAACAGATTCCACTGCCACTTCTCACCACGTGACTGGCAGCGAC							
rh. 64-E	835	AGACCCCCCTGGGGGTATTTTGACTTAAACAGATTCCACTGCCACTTCTCACCACGTGACTGGCAGCGAC							
hu. 42-E	835	AGACCCCCCTGGGGGTATTTTGACTTCAACAGATTCCACTGCCACTTCTCACCACGTGACTGGCAGCGAC							
rh. 57-E	835	AGACCCCCCTGGGGGTATTTTGACTTAAACAGATTCCACTGCCACTTCTCACCACGTGACTGGCAGCGAC							
hu. 40-E	835	AGACCCCCCTGGGGGTATTTTGACTTCAACAGATTCCACTGCCACTTCTCACCACGTGACTGGCAGCGAC							
AAV8-E	835	AGACCCCCCTGGGGGTATTTTGACTTAAACAGATTCCACTGCCACTTCTCACCACGTGACTGGCAGCGAC							
rh. 58-E	835	AGACCCCCCTGGGGGTATTTTGACTTAAACAGATTCCACTGCCACTTCTCACCACGTGACTGGCAGCGAC							
rh. 40-E	835	AGACCCCCCTGGGGGTATTTTGACTTCAACAGATTCCACTGCCACTTCTCACCACGTGACTGGCAGCGAC							
hu. 67-E	835	AGACCCCCCTGGGGGTATTTTGACTTCAACAGATTCCACTGCCACTTCTCACCACGTGACTGGCAGCGAC							
hu. 17-E	835	AGACCCCCCTGGGGGTATTTTGACTTAAACAGATTCCACTGCCACTTCTCACCACGTGACTGGCAGCGAC							
hu. 6-E	835	AGACCCCCCTGGGGGTATTTTGACTTAAACAGATTCCACTGCCACTTCTCACCACGTGACTGGCAGCGAC							
hu. 66-E	835	AGACCCCCCTGGGGGTATTTTGACTTCAACAGATTCCACTGCCACTTCTCACCACGTGACTGGCAGCGAC							
rh. 38-E	835	AGACCCCCCTGGGGGTATTTTGACTTCAACAGATTCCACTGCCACTTCTCACCACGTGACTGGCAGCGAC							
hu. 32-F	832	AGACCCCCCTGGGGGTATTTTGACTTCAACAGATTCCACTGCCACTTCTCACCACGTGACTGGCAGCGAC							
AAV9/hu	832	AGACCCCCCTGGGGGTATTTTGACTTCAACAGATTCCACTGCCACTTCTCACCACGTGACTGGCAGCGAC							
hu. 31-F	832	AGACCCCCCTGGGGGTATTTTGACTTCAACAGATTCCACTGCCACTTCTCACCACGTGACTGGCAGCGAC							

FIG. 3AJ



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AAV5	869	TCATCAACAACACTAGGGGCTTCAGACCCCGGTCCCTCAGAGTCAAATCTTCAACATTCAAGTCAAAGA
AAV3-3	896	TCAATAACAACACTGGGGATTCCGGGCCAAGAACTCAGCTTCAAGCTCTTCAACATCCAAGTTAGAGG
AAV4-4	869	TCATCAACAACAACACTGGGCATCGACCCCAAAGCCATGCGGTCAAAATCTTCAACATCCAGGTCAAAGGA
AAV1-A	899	TCATCAACAACAATTTGGGGATTCCGGCCCAGAGACTCAACTTCAAACCTCTTCAACATCCAAGTCAAAGGA
hu.46-A	899	TCATCAACAACAATTTGGGGATTCCGGCCCAGAGACTCAACTTCAAACCTCTTCAACATCCAAGTCAAAGGA
hu.48-A	899	TCATCAACAACAATTTGGGGATTCCGGCCCAGAGACTCAACTTCAAACCTCTTCAACATCCAAGTCAAAGGA
hu.44-A	899	TCATCAACAACAATTTGGGGATTCCGGCCCAGAGACTCAACTTCAAACCTCTTCAACATCCAAGTCAAAGGA
hu.43-A	902	TCATCAACAACAATTTGGGGATTCCGGCCCAGAGACTCAACTTCAAACCTCTTCAACATCCAAGTCAAAGGA
AAV6-A	899	TCATCAACAACAATTTGGGGATTCCGGCCCAGAGACTCAACTTCAAAGCTCTTCAACATCCAAGTCAAAGGA
hu.34-B	896	TCATCAACAACAACACTGGGGATTCCGACCCCAAGAGACTCAACTTCAAGCTCTTTAAACATTTCAAGTCAAAGA
hu.47-B	896	TCATCAACAACAACACTGGGGATTCCGACCCCAAGAGACTCAACTTCAAGCTCTTTAAACATTTCAAGTCAAAGA
hu.29-B	896	TCATCAACAACAACACTGGGGATTCCGACCCCAAGAGACTCAACTTCAAGCTCTTTAAACATTTCAAGTCAAAGA
hu.63-B	896	TCATCAACAACAATTTGGGGATTCCGGCCCCAAAAGACTCAACTTCAAGCTCTTTAAACATTTCAAGTCAAAGGA
hu.56-B	896	TCATCAACAACAACACTGGGGATTCCGGCCCCAAAAGACTCAACTTCAAGCTGTTTAAACATTTCAAGTCAAAGGA
hu.45-B	896	TCATCAACAACAACACTGGGGATTCCGACCCCAAGAGACTCAACTTCAAGCTCTTTAAACATTTCAAGTCAAAGA
hu.57-B	893	TCATCAACAACAACACTGGGGATTCCGGCCCCAAAAGACTCAACTTCAAGCTGTTTAAACATTTCAAGTCAAAGGA
hu.35-B	896	TCATCAACAACAACACTGGGGATTCCGACCCCAAGAGACTCAACTTCAAGCTCTTTAAACATTTCAAGTCAAAGA
hu.58-B	896	TCATCAACAACAACACTGGGGATTCCGGCCCCAAGAGACTCAACTTCAAGCTCTTTAAACATTTCAAGTCAAAGA
hu.28-B	896	TCATCAACAACAACACTGGGGATTCCGACCCCAAGAGACTCAACTTCAAGCTCTTTAAACATTTCAAGTCAAAGA
hu.51-B	896	TCATCAACAACAACACTGGGGATTCCGACCCCAAGAGACTCAACTTCAAGCTCTTTAAACATTTCAAGTCAAAGA
hu.19-B	896	TCATCAACAACAACACTGGGGATTCCGGCCCCAAGAGACTCAGCTTCAAGCTCTTTAAACATTTCAAGTCAAAGA
hu.49-B	896	TCATCAACAACAACACTGGGGATTCCGGCCCCAAGAGACTCAACTTCAAGCTCTTTAAACATTTCAAGTCAAAGGA
hu.52-B	896	TCATCAACAACAACACTGGGGATTCCGACCCCAAGAGACTCAACTTCAAGCTCTTTAAACATTTCAAGTCAAAGA
hu.13-B	896	TCATCAACAACAACACTGGGGATTCCGACCCCAAGAGACTCAACTTCAAGCTCTTTAAACATTTCAAGTCAAAGA
AAV2-B	896	TCATCAACAACAACACTGGGGATTCCGACCCCAAGAGACTCAACTTCAAGCTCTTTAAACATTTCAAGTCAAAGA
hu.20-B	896	TCATCAACAACAACACTGGGGATTCCGGCCCCAAGAGACTCAGCTTCAAGCTCTTTAAACATTTCAAGTCAAAGA
hu.24-B	896	TCATCAACAACAACACTGGGGATTCCGGCCCCAAGAGACTCAGCTTCAAGCTCTTTAAACATTTCAAGTCAAAGA
hu.64-B	896	TCATCAACAACAATTTGGGGATCCGGCCCCAAAAGACTCAACTTCAAGCTCTTTAAACATTTCAAGTCAAAGGA
hu.27-B	896	TCATCAACAACAACACTGGGGATTCCGGCCCCAAGAGACTCAGCTTCAAGCTCTTTAAACATTTCAAGTCAAAGA

FIG. 3AK

hu. 21-B	896	TCATCAACAACAACACTGGGGATTCCGGGCCCAAGAGACTCAGCTTCAAGCTCTTTAAACATTCAAGTCAAAGA
hu. 22-B	896	TCATCAACAACAACACTGGGGATTCCGGGCCCAAGAGACTCAGCTTCAAGCTCTTTAAACATTCAAGTCAAAGA
hu. 23-B	896	TCATCAACAACAACACTGGGGATTCCGGGCCCAAGAGACTCAGCTTCAAGCTCTTTAAACATTCAAGTCAAAGA
hu. 7-C	896	TCATCAACAACAACACTGGGGATTCCGACCCCAAGAGACTCAACTTCAAGCTCTTTAAACATTCAAGTCAAAGA
hu. 61-C	896	TCATCAACAACAACACTGGGGATTCCGACCCCAAGAGACTCAACTTCAAGCTCTTTAAACATTCAAGTCAAAGA
rh. 56-C	896	TCATCAACAACAACACTGGGGATTCCGACCCCAAGAGACTCAACTTCAAGCTCTTTAAACATTCAAGTCAAAGA
hu. 9-C	896	TCATCAACAACAACACTGGGGATTCCGACCCCAAGAGACTCAACTTCAAGCTCTTTAAACATTCAAGTCAAAGA
hu. 54-C	896	TCATCAACAACAACACTGGGGATTCCGACCCCAAGAGACTCAACTTCAAGCTCTTTAAACATTCAAGTCAAAGA
hu. 53-C	896	TCATCAACAACAACACTGGGGATTCCGACCCCAAGAGACTCAACTTCAAGCTCTTTAAACATTCAAGTCAAAGA
hu. 60-C	896	TCATCAACAACAACACTGGGGATTCCGACCCCAAGAGACTCAACTTCAAGCTCTTTAAACATTCAAGTCAAAGA
hu. 55-C	896	TCATCAACAACAACACTGGGGATTCCGACCCCAAGAGACTCAACTTCAAGCTCTTTAAACATTCAAGTCAAAGA
hu. 2-C	896	TCATCAACAACAACACTGGGGATTCCGGGCCCAAGAGACTCAACTTCAAGCTCTTTAAATATTCAAGTCAAAGA
hu. 1-C	896	TCATCAACAACAACACTGGGGATTCCGGGCCCAAGAGACTCAACTTCAAGCTCTTTAAATATTCAAGTCAAAGA
hu. 18-C	896	TCATCAACAACAACAGCTGGGGATTCCGACCCCAAGAGACTCAACTTCAAGCTCTTTAAACATTCAAGTCAAAGA
hu. 3-C	899	TCATCAACAGCAACTGGGGATTCCGGGCCCAAGAGACTCAACTTCAAGCTCTTTAAATATTCAAGTCAAAGA
hu. 25-C	896	TCATCAACAACAACACTGGGGATTCCGACCCCAAGAGACTCAACTTCAAGCTCTTTAAACATTCAAGTCAAAGA
hu. 15-C	896	TCATCAACAACAACACTGGGGATTCCGACCCCAAGAGACTCAACTTCAAGCTCTTTAAACATTCAAGTCAAAGA
hu. 16-C	896	TCATCAACAACAACACTGGGGATTCCGACCCCAAGAGACTCAACTTCAAGCTCTTTAAACATTCAAGTCAAAGA
hu. 11-C	896	TCATCAACAACAACACTGGGGATTCCGACCCCAAGAGACTCAACTTCAAGCTCTTTAAACATTCAAGTCAAAGA
hu. 10-C	896	TCATCAACAACAACACTGGGGATTCCGACCCCAAGAGACTCAACTTCAAGCTCTTTAAACATTCAAGTCAAAGA
hu. 4-C	896	TCGTCAACAACAACCCGGGGATTCCGGGCCCAAGAGACTCAACTTCAAGCTCTTTAAATATTCAAGTCAAAGA
rh. 54-D	902	TCATCAACAACAACACTGGGGATTCCGGGCCCAAGAGACTCAACTTCAAGCTCTTTCAACATCCAGTCAAAGA
rh. 48-D	902	TCATCAACAGCAACTGGGGATTCCGGGCCCAAGAGACTCAACTTCAAGCTGTTCACATCCAGGTCAAAGA
rh. 55-D	902	TCATCAACAACAACACTGGGGATTCCGGGCCCAAGAGACTCAACTTCAAGCTGTTCACATCCAGGTCAAAGA
rh. 62-D	902	TCATCAACAACAACACTGGGGATTCCGGGCCCAAGAGACTCAACTTCAAGCTGTTCACATCCAGGTCAAAGA
AAV7-D	902	TCATCAACAACAACACTGGGGATTCCGGGCCCAAGAGACTGCGGTTCAGCTCTTCAACATCCAGGTCAAAGA
rh. 52-E	905	TCATCAACAACAACACTGGGGATTCCGGGCCCAAGAGACTCAGCTTCAAGCTCTTCAACATCCAGGTCAAAGA
rh. 51-E	905	TCATCAACAACAACACTGGGGATTCCGGGCCCAAGAGACTCAGCTTCAAGCTCTTCAACATCCAGGTCAAAGA
hu. 39-E	905	TCATCAACAACAACACTGGGGATTCCGGGCCCAAGAGACTCAGCTTCAAGCTCTTCAACATCCAGGTCAAAGA
rh. 53-E	905	TCATCAACAACAACACTGGGGATTCCGGGCCCAAGAGACTCAGCTTCAAGCTCTTCAACATCCAGGTCAAAGA

FIG. 3AL

hu. 37-E	905	TCATCAACAACAACTGGGGATTCCGGGCCAAAAAGACTCAGCTTCAAGCTCTTCAACATCCAGGTCAAGGA	990	1000	1010	1020	1030	1040	1050
rh. 43-E	902	TCATCAACAACAACTGGGGATTCCGGGCCAAAGAGACTCAGCTTCAAGCTCTTCAACATCCAGGTCAAGGA		.... .... .... .... .... .... .... .... .... ....					
rh. 50-E	905	TCATCAACAACAACTGGGGATTCCGGGCCAAAGAGACTCAGCTTCAAGCTCTTCAACATCCAGGTCAAGGA	939		GGTCACGGTGCAGGACTCCACACCACCATCGCCAAACAACCTCACCTCCACCGTCCAAGTGTTCACGGAC				
rh. 49-E	905	TCATCAACAACAACTGGGGATTCCGGGCCAAAGAGACTCAGCTTCAAGCTCTTCAACATCCAGGTCAAGGA	966		GGTCACGGCAGAACGATGGCACGACGACTATTGCCAATAACCTTACCAGCACGGTTCAAGTGTTCACGGAC				
rh. 61-E	905	CCATCAACAACAACTGGGGATTCCGGGCCAAAGAGACTCAGCTTCAAGCTCTTCAACATCCAGGTCAAGGA	939		GGTCACGACGTCGAACGGCGAGACAACGGTGGCTAATAACCTTACCAGCACGGTTCAGATCTTTGCGGAC				
hu. 41-E	905	TCATCAACAACAACTGGGGATTCCGGGCCAAAAAGACTCAGCTTCAAGCTCTTCAACATCCAGGTCAAGGA	969		GGTCACGACGGAATGATGGCGTCACAACCATCGCTAATAACCTTACCAGCACGGTTCAGTCTTCTCGGAC				
rh. 64-E	905	TCATCAACAACAACTGGGGATTCCGGGCCAAAGAGACTCAGCTTCAAGCTCTTCAACATCCAGGTCAAGGA	969		GGTCACGACGGAATGATGGCGTCACAACCATCGCTAATAACCTTACCAGCACGGTTCAGTCTTCTCGGAC				
hu. 42-E	905	TCATCAACAACAACTGGGGATTCCGGGCCAAAAAGACTCAGCTTCAAGCTCTTCAACATCCAGGTCAAGGA	969		GGTCACGACGGAATGATGGCGTCACAACCATCGCTAATAACCTTACCAGCACGGTTCAGTCTTCTCGGAC				
rh. 57-E	905	TCATCAACAACAACTGGGGATTCCGGGCCAAAGAGACTCAGCTTCAAGCTCTTCAACATCCAGGTCAAGGA							
hu. 40-E	905	TCATCAACAACAACTGGGGATTCCGGGCCAAAAAGACTCAGCTTCAAGCTCTTCAACATCCAGGTCAAGGA							
AAV8-E	905	TCATCAACAACAACTGGGGATTCCGGGCCAAAGAGACTCAGCTTCAAGCTCTTCAACATCCAGGTCAAGGA							
rh. 58-E	905	TCATCAACAACAACTGGGGATTCCGGGCCAAAGAGACTCAGCTTCAAGCTCTTCAACATCCAGGTCAAGGA							
rh. 40-E	905	TCATCAACAACAACTGGGGATTCCGGGCCAAAAAGACTCAGCTTCAAGCTCTTCAACATCCAGGTCAAGGA							
hu. 67-E	905	TCATCAACAACAACTGGGGATTCCGGGCCAAAAAGACTCAGCTTCAAGCTCTTCAACATCCAGGTCAAGGA							
hu. 17-E	905	TCATCAACAACAACTGGGGATTCCGGGCCAAAGAGACTCAACTTCAAGCTCTTCAACATCCAGGTCAAGGA							
hu. 6-E	905	TCATCAACAACAACTGGGGATTCCGGGCCAAAGAGACTCAACTTCAAGCTCTTCAACATCCAGGTCAAGGA							
hu. 66-E	905	TCATCAACAACAACTGGGGATTCCGGGCCAAAAAGACTCAGCTTCAAGCTCTTCAACATCCAGGTCAAGGA							
rh. 38-E	905	TCATCAACAACAACTGGGGATTCCGGGCCAAAAAGACTCAGCTTCAAGCTCTTCAACATCCAGGTCAAGGA							
hu. 32-F	902	TCATCAACAACAACTGGGGATTCCGGCCTAAGCGACTCAACTTCAAGCTCTTCAACATCCAGGTCAAGGA							
AAV9/hu	902	TCATCAACAACAACTGGGGATTCCGGCCTAAGCGACTCAACTTCAAGCTCTTCAACATCCAGGTCAAGGA							
hu. 31-F	902	TCATCAACAACAACTGGGGATTCCGGCCTAAGCGACTCAACTTCAAGCTCTTCAACATCCAGGTCAAGGA							

FIG. 3AM

hu. 44-A	969	GGTCACGCGAATGATGGCGTCACAACCATCGCTAATAAACCTTACCAGCACGGTCAAGTCTTCTCGGAC
hu. 43-A	972	GGTCACGCGAATGATGGCGTCACAACCATCGCTAATAAACCTTACCAGCACGGTCAAGTCTTCTCGGAC
AAV6-A	969	GGTCACGCGAATGATGGCGTCACGACCATCGCTAATAAACCTTACCAGCACGGTCAAGTCTTCTCGGAC
hu. 34-B	966	GGTCACGCGAATGACGGTACGACGACGATTGCCAATAAACCTTACCAGCACGGTCAAGTGTCTACTGAC
hu. 47-B	966	GGTCACGCGAATGACGGTACGACGACGATTGCCAATAAACCTTACCAGCACGGTCAAGTGTCTACTGAC
hu. 29-B	966	GGTCACGCGAATGACGGTACGACGACGATTGCCAATAAACCTTACCAGCACGGTCAAGTGTCTACTGAC
hu. 63-B	966	GGTCACGCGAATGACGGTACGACGACGATTGCCAATAAACCTTACCAGCACGGTCAAGTGTCTACTGAC
hu. 56-B	966	GGTCACGCGAATGACGGTACGACGACGATTGCCAATAAACCTTACCAGCACGGTCAAGTGTCTACTGAC
hu. 45-B	966	GGTCACGCGAATGACGGTACGACGACGATTGCCAATAAACCTTACCAGCACGGTCAAGTGTCTACTGAC
hu. 57-B	963	GGTCACGCGAATGACGGTACGACGACGATTGCCAATAAACCTTACCAGCACGGTCAAGTGTCTACTGAC
hu. 35-B	966	GGTCACGCGAATGACGGTACGACGACGATTGCCAATAAACCTTACCAGCACGGTCAAGTGTCTACTGAC
hu. 58-B	966	GGTCACGCGAATGATGGTACGACGACGATTGCCAATAAACCTTACCAGCACGGTCAAGTGTCTACTGAC
hu. 28-B	966	GGTCACGCGAATGACGGTACGACGACGATTGCCAATAAACCTTACCAGCACGGTCAAGTGTCTACTGAC
hu. 51-B	966	GGTCACGCGAATGACGGTACGACGACGATTGCCAATAAACCTTACCAGCACGGTCAAGTGTCTACTGAC
hu. 19-B	966	GGTCACGCGAATGACGGTACGACGACGATTGCCAATAAACCTTACCAGCACGGTCAAGTGTCTACTGAC
hu. 49-B	966	GGTCACGCGAATGACGGTACGACGACGATTGCCAATAAACCTTACCAGCACGGTCAAGTGTCTACTGAC
hu. 52-B	966	GGTCACGCGAATGACGGTACGACGACGATTGCCAATAAACCTTACCAGCACGGTCAAGTGTCTACTGAC
hu. 13-B	966	GGTCACGCGAATGACGGTACGACGACGATTGCCAATAAACCTTACCAGCACGGTCAAGTGTCTACTGAC
AAV2-B	966	GGTCACGCGAATGACGGTACGACGACGATTGCCAATAAACCTTACCAGCACGGTCAAGTGTCTACTGAC
hu. 20-B	966	GGTCACGCGAATGACGGTACGACGACGATTGCCAATAAACCTTACCAGCACGGTCAAGTGTCTACTGAC
hu. 24-B	966	GGTCACGCGAATGACGGTACGACGACGATTGCCAATAAACCTTACCAGCACGGTCAAGTGTCTACTGAC
hu. 64-B	966	GGTCACGCGAATGACGGTACGACGACGATTGCCAATAAACCTTACCAGCACGGTCAAGTGTCTACTGAC
hu. 27-B	966	GGTCACGCGAATGACGGTACGACGACGATTGCCAATAAACCTTACCAGCACGGTCAAGTGTCTACTGAC
hu. 21-B	966	GGTCACGCGAATGACGGTACGACGACGATTGCCAATAAACCTTACCAGCACGGTCAAGTGTCTACTGAC
hu. 22-B	966	GGTCACGCGAATGACGGTACGACGACGATTGCCAATAAACCTTACCAGCACGGTCAAGTGTCTACTGAC
hu. 23-B	966	GGTCACGCGAATGACGGTACGACGACGATTGCCAATAAACCTTACCAGCACGGTCAAGTGTCTACTGAC
hu. 7-C	966	GGTCACGCGAATGACGGTACGACGACGATTGCCAATAAACCTTACCAGCACGGTCAAGTGTCTACTGAC
hu. 61-C	966	GGTCACGCGAATGACGGTACGACGACGATTGCCAATAAACCTTACCAGCACGGTCAAGTGTCTACTGAC
rh. 56-C	966	GGTCACGCGAATGACGGTACGACGACGATTGCCAATAAACCTTACCAGCACGGTCAAGTGTCTACTGAC
hu. 9-C	966	GGTCACGCGAATGACGGTACGACGACGATTGCCAATAAACCTTACCAGCACGGTCAAGTGTCTACTGAC

FIG. 3AN

hu. 54-C	966	GGTCACGCAGAATGACGGTACGACGACGATTGCCAATAAACCTTACCAGCACGGTTCAGGTGTTTACTGAC
hu. 53-C	966	GGTCACGCAGAATGACGGTACGACGACGATTGCCAATAAACCTTACCAGCACGGTTCAGGTGTTTACTGAC
hu. 60-C	966	GGTCACGCAGAATGACGGTACGACGACGATTGCCAATAAACCTTACCAGCACGGTTCAGGTGTTTACTGAC
hu. 55-C	966	GGTCACGCAGAATGACGGTACGACGACGATTGCCAATAAACCTTACCAGCACGGTTCAGGTGTTTACTGAC
hu. 2-C	966	GGTCACGCAGAATGACGGTACGACGACGATTGCCAATAAACCTTACCAGCACGGTTCAGGTGTTTACTGAC
hu. 1-C	966	GGTCACGCAGAATGACGGTACGACGACGATTGCCAATAAACCTTACCAGCACGGTTCAGGTGTTTACTGAC
hu. 18-C	966	GGTCACGCAGAATGACGGTACGACGACGATTGCCAATAAACCTTACCAGCACGGTTCAGGTGTTTACTGAC
hu. 3-C	969	GGTCACGCAGAATGACGGTACGACGACGATTGCCAATAAACCTTACCAGCACGGTTCAGGTGTTTACTGAC
hu. 25-C	966	GGTCACGCAGAATGACGGTACGACGACGATTGCCAATAAACCTTACCAGCACGGTTCAGGTGTTTACTGAC
hu. 15-C	966	GGTCACGCAGAATGACGGTACGACGACGATTGCCAATAAACCTTACCAGCACGGTTCAGGTGTTTACTGAC
hu. 16-C	966	GGTCACGCAGAATGACGGTACGACGACGATTGCCAATAAACCTTACCAGCACGGTTCAGGTGTTTACTGAC
hu. 11-C	966	GGTCACGCAGAATGACGGTACGACGACGATTGCCAATAAACCTTACCAGCACGGTTCAGGTGTTTACTGAC
hu. 10-C	966	GGTCACGCAGAATGACGGTACGACGACGATTGCCAATAAACCTTACCAGCACGGTTCAGGTGTTTACTGAC
hu. 4-C	966	GGTCACGCAGAATGACGGTACGACGACGATTGCCAATAAACCTTACCAGCACGGTTCAGGTGTTTACTGAC
rh. 54-D	972	GGTCACGACGAATGACGGCGTCACGACCATCGCTAATAAACCTTACCAGCACGGTTCAGGTCTTTTCGGAC
rh. 48-D	972	GGTCACAACGAATGACGGCGTCACGACCATCGCCAATAAACCTTACCAGCACGGTTCAGGTCTTTTCGGAC
rh. 55-D	972	GGTCACAACGAATGACGGCGTCACGACCATCGCCAATAAACCTTACCAGCACGGTTCAGGTCTTTTCGGAC
rh. 62-D	972	GGTCACAACGGGTGACGGCGTCACGACCATCGCCAATAAACCTTACCAGCACGGTTCAGGTCTTTTCGGAC
AAV7-D	972	GGTCACGACGAATGACGGCGTTACGACCATCGCTAATAAACCTTACCAGCACGATTTCAGGTATTCCTCGGAC
rh. 52-E	975	GGTCACGCAGAATGAAGGCACCAAGACCATCGCCAATAGCCTCACAGCACCATCCAGGTGTTTACGGAC
rh. 51-E	975	GGTCACGCAGAATGAAGGCACCAAGACCATCGCCAATAAACCTCACAGCACCATCCAGGTGTTTACGGAC
hu. 39-E	975	GGTCACGCAGAATGAAGGCACCAAGACCATCGCCAATAAACCTCGCCAGCACCATCCAGGTGTTTACGGAC
rh. 53-E	975	GGTCACGCAGAATGAAGGCACCAAGACCATCGCCAATAAACCTCACAGCACCATCCAGGTGTTTACGGAC
hu. 37-E	975	GGTCACGCAGAATGAAGGCACCAAGACCATCGCCAATAAACCTTACCAGCACGATTTCAGGTATTCAGGGAC
rh. 43-E	972	GGTCACGCAGAATGAAGGCACCAAGACCATCGCCAATAAACCTCACAGCACCATCCAGGTGTTTACGGAC
rh. 50-E	975	GGTCACGCAGAATGAAGGCACCAAGACCATCGCCAATAAACCTCACAGCACCATCCAGGTGTTTACGGAC
rh. 49-E	975	GGTCACGCAGAATGAAGGCACCAAGACCATCGCCAATAAACCTCACAGCACCATCCAGGTGTTTACGGAC
rh. 61-E	975	GGTCACGCAGAATGAAGGCACCAAGACCATCGCCAATAAACCTCACAGCACCATCCAGGTGTTTACGGAC
hu. 41-E	975	GGTCACGCAGAATGAAGGCACCAAGACCATCGCCAATAAACCTTACCAGCACGATTTCAGGTATTCAGGGAC
rh. 64-E	975	GGTCACGCAGAATGAAGGCACCAAGACCATCGCCAATAAACCTCACAGCACCATCCAGGTGTTTACGGAC

FIG. 3A0

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hu.42-E	975	GGTCACGCAGAATGAAGGCACCAAGACCATCGCCAATAACCTTACCAGCACGATTCAGGTATTACGGAC	1060	1070	1080	1090	1100	1110	1120
rh.57-E	975	GGTCACGCAGAATGAAGGCACCAAGACCATCGCCAATAACCTTACCAGCACGATTCAGGTATTACGGAC							
hu.40-E	975	GGTCACGCAGAATGAAGGCACCAAGACCATCGCCAATAACCTTACCAGCACGATTCAGGTATTACGGAC							
AAV8-E	975	GGTCACGCAGAATGAAGGCACCAAGACCATCGCCAATAACCTTACCAGCACGATTCAGGTATTACGGAC							
rh.58-E	975	GGTCACGCAGAATGAAGGCACCAAGACCATCGCCAATAACCTTACCAGCACGATTCAGGTATTACGGAC							
rh.40-E	975	GGTCACGCAGAATGAAGGCACCAAGACCATCGCCAATAACCTTACCAGCACGATTCAGGTATTACGGAC							
hu.67-E	975	GGTCACGCAGAATGAAGGCACCAAGACCATCGCCAATAACCTTACCAGCACGATTCAGGTATTACGGAC							
hu.17-E	975	GGTCACGCAGAATGAAGGCACCAAGACCATCGCCAATAACCTTACCAGCACGATTCAGGTATTACGGAC							
hu.6-E	975	GGTCACGCAGAATGAAGGCACCAAGACCATCGCCAATAACCTTACCAGCACGATTCAGGTATTACGGAC							
hu.66-E	975	GGTCACGCAGAATGAAGGCACCAAGACCATCGCCAATAACCTTACCAGCACGATTCAGGTATTACGGAC							
rh.38-E	975	GGTCACGCAGAATGAAGGCACCAAGACCATCGCCAATAACCTTACCAGCACGATTCAGGTATTACGGAC							
hu.32-F	972	GGTTACGGACAACAATGGAGTCAAGACCATCGCCAATAACCTTACCAGCACGATTCAGGTATTACGGAC							
AAV9/hu	972	GGTTACGGACAACAATGGAGTCAAGACCATCGCCAATAACCTTACCAGCACGATTCAGGTATTACGGAC							
hu.31-F	972	GGTTACGGACAACAATGGAGTCAAGACCATCGCCAATAACCTTACCAGCACGATTCAGGTATTACGGAC							
AAV5	1009	GACGACTACCAAGCTGCCCTACGTCTCGGCAACGGGACCGAGGGATGCCCTGCCGGCCTTCCCTCCGCAGG							
AAV3-3	1036	TCGGAGTATCAGCTCCCGTACGTGCTCGGGTCGGCGCACCAAGGTGTCTCCCGCGTTTCCAGCGGACG							
AAV4-4	1009	TCGTCTGTAAGAACTGCCGTACGTGATGGATGCGGGTCAAGAGGGCAGCCTGCCTCCTTTCCCAACGACG							
AAV1-A	1039	TCGGAGTACCAGCTTCCGTACGTCTCGGCTCTGCGCACCAGGGTGCTCCCTCCGTTCCTCCGGCGGACG							
hu.46-A	1039	TCGGAGTACCAGCTTCCGTACGTCTCGGCTCTGCGCACCAGGGTGCTCCCTCCGTTCCTCCGGCGGACG							
hu.48-A	1039	TCGGAGTACCAGCTTCCGTACGTCTCGGCTCTGCGCACCAGGGTGCTCCCTCCGTTCCTCCGGCGGACG							
hu.44-A	1039	TCGGAGTACCAGCTTCCGTACGTCTCGGCTCTGCGCACCAGGGTGCTCCCTCCGTTCCTCCGGCGGACG							
hu.43-A	1042	TCGGAGTACCAGCTTCCGTACGTCTCGGCTCTGCGCACCAGGGTGCTCCCTCCGTTCCTCCGGCGGACG							
AAV6-A	1039	TCGGAGTACCAGCTTCCGTACGTCTCGGCTCTGCGCACCAGGGTGCTCCCTCCGTTCCTCCGGCGGACG							
hu.34-B	1036	TCGGAGTACCAGCTCCCGTACGTCTCGGCTCGGCGCATCAAGGATGCCCTCCCGCCGTTCCAGCAGACG							
hu.47-B	1036	TCGGAGTACCAGCTCCCGTACGTCTCGGCTCGGCGCATCAAGGATGCCCTCCCGCCGTTCCAGCAGACG							
hu.29-B	1036	TCGGAGTACCAGCTCCCGTACGTCTCGGCTCGGCGCATCAAGGATGCCCTCCCGCCGTTCCAGCAGACG							
hu.63-B	1036	TCGGAGTACCAGCTCCCGTACGTCTCGGCTCGGCGCATCAAGGATGCCCTCCCGCCGTTCCAGCAGACG							

FIG. 3AP

hu.56-B 1036 TTGGAGTACCAGCTCCCGTACGTCTCGGCTCGGCGCATCAAGGATGCCCTCCCGCCGTTCCACGACGACG  
 hu.45-B 1036 TCGGGGTACCAGCTCCCGTACGTCTCGGCTCGGCGCATCAAGGATGCCCTCCCGCCGTTCCACGACGACG  
 hu.57-B 1033 TTGGAGTACCAGCTCCCGTACGTCTCGGCTCGGCGCATCAAGGATGCCCTCCCGCCGTTCCACGACGACG  
 hu.35-B 1036 TCGGAGTACCAGCTCCCGTACGTCTCGGCTCGGCGCATCAAGGATGCCCTCCCGCCGTTCCACGACGACG  
 hu.58-B 1036 TCGGAGTACCAGCTCCCGTACGTCTCGGCTCGGCGCATCAAGGATGCCCTCCCGCCGTTCCACGACGACG  
 hu.28-B 1036 TCGGAGTACCAGCTCCCGTACGTCTCGGCTCGGCGCATCAAGGATGCCCTCCCGCCGTTCCACGACGACG  
 hu.51-B 1036 TCGGAGTACCAGCTCCCGTACGTCTCGGCTCGGCGCATCAAGGATGCCCTCCCGCCGTTCCACGACGACG  
 hu.19-B 1036 TCGGAGTACCAGCTCCCGTACGTCTCGGCTCGGCGCATCAAGGATGCCCTCCCGCCGTTCCACGACGACG  
 hu.49-B 1036 TCGGAGTACCAGCTCCCGTACGTCCCGGCTCGGCGCATCAAGGATGCCCTCCCGCCGTTCCACGACGACG  
 hu.52-B 1036 TCGGAGTACCAGCTCCCGTACGTCTCGGCTCGGCGCATCAAGGATGCCCTCCCGCCGTTCCACGACGACG  
 hu.13-B 1036 TCGGAGTACCAGCTCCCGTACGTCTCGGCTCGGCGCATCAAGGATGCCCTCCCGCCGTTCCACGACGACG  
 AAV2-B 1036 TCGGAGTACCAGCTCCCGTACGTCTCGGCTCGGCGCATCAAGGATGCCCTCCCGCCGTTCCACGACGACG  
 hu.20-B 1036 TCGGAGTACCAGCTCCCGTACGTCTCGGCTCGGCGCATCAAGGATGCCCTCCCGCCGTTCCACGACGACG  
 hu.24-B 1036 TCGGAGTACCAGCTCCCGTACGTCTCGGCTCGGCGCATCAAGGATGCCCTCCCGCCGTTCCACGACGACG  
 hu.64-B 1036 TCGGAGTACCAGCTCCCGTACGTCTCGGCTCGGCGCATCAAGGATGCCCTCCCGCCGTTCCACGACGACG  
 hu.27-B 1036 TCGGGGTACCAGCTCCCGTACGTCTCGGCTCGGCGCATCAAGGATGCCCTCCCGCCGTTCCACGACGACG  
 hu.21-B 1036 TCGGAGTACCAGCTCCCGTACGTCTCGGCTCGGCGCATCAAGGATGCCCTCCCGCCGTTCCACGACGACG  
 hu.22-B 1036 TCGGAGTACCAGCTCCCGTACGTCTCGGCTCGGCGCATCAAGGATGCCCTCCCGCCGTTCCACGACGACG  
 hu.23-B 1036 TCGGAGTACCAGCTCCCGTACGTCTCGGCTCGGCGCATCAAGGATGCCCTCCCGCCGTTCCACGACGACG  
 hu.7-C 1036 TCGGAGTACCAGCTCCCGTACGTCTCGGCTCGGCGCATCAAGGATGCCCTCCCGCCGTTCCACGCGGACG  
 hu.61-C 1036 TCGGAGTACCAGCTCCCGTACGTCTCGGCTCGGCGCATCAAGGATGCCCTCCCGCCGTTCCACGCGGACG  
 rh.56-C 1036 TCGGAGTACCAGCTCCCGTACGTCTCGGCTCGGCGCATCAAGGATGCCCTCCCGCCGTTCCACGCGGACG  
 hu.9-C 1036 TCGGAGTACCAGCTCCCGTACGTCTCGGCTCGGCGCATCAAGGATGCCCTCCCGCCGTTCCACGCGGACG  
 hu.54-C 1036 TCGGAGTACCAGCTCCCGTACGTCTCGGCTCGGCGCATCAAGGATGCCCTCCCGCCGTTCCACGCGGACG  
 hu.53-C 1036 TCGGAGTACCAGCTCCCGTACGTCTCGGCTCGGCGCATCAAGGATGCCCTCCCGCCGTTCCACGCGGACG  
 hu.60-C 1036 TCGGAGTACCAGCTCCCGTACGTCTCGGCTCGGCGCATCAAGGATGCCCTCCCGCCGTTCCACGCGGACG  
 hu.55-C 1036 TCGGAGTACCAGCTCCCGTACGTCTCGGCTCGGCGCATCAAGGATGCCCTCCCGCCGTTCCACGCGGACG  
 hu.2-C 1036 TCGGAGTACCAGCTCCCGTACGTCTCGGCTCGGCGCATCAAGGATGCCCTCCCGCCGTTCCACGCGGACG  
 hu.1-C 1036 TCGGAGTACCAGCTCCCGTACGTCTCGGCTCGGCGCATCAAGGATGCCCTCCCGCCGTTCCACGCGGACG  
 hu.18-C 1036 TCGGAGTACCAGCTCCCGTACGTCTCGGCTCGGCGCATCAAGGATGCCCTCCCGCCGTTCCACGACGACG

FIG. 3A



hu.3-C	1039	TCGGAGTACCAGCTCCCGTACGTCCCGGGCTCGCGGCATCAAGGATGCCCTCCCGCCGTTTCCAGCGGACG
hu.25-C	1036	TCGGAGTACCAGCTCCCGTACGTCTCGGCTCGGCGCATCAAGGATGCCCTCCCGCCGTTTCCAGCGGACG
hu.15-C	1036	TCGGGGTACCAGCTCCCGTACGTCTCGGCTTGGCGCATCAAGGATGCCCTCCCGCCGTTTCCAGCAGACG
hu.16-C	1036	TCGGAGTACCAGCTCCCGTACGTCTCGGCTCGGCGCATCAAGGATGCCCTCCCGCCGTTTCCAGCAGACG
hu.11-C	1036	TCGGAGTACCAGCTCCCGTACGTCTCGGCTCGGCGCATCAAGGATGCCCTCCCGCCGTTTCCAGCGGACG
hu.10-C	1036	TCGGAGTACCAGCTCCCGTACGTCTCGGCTCGGCGCATCAAGGATGCCCTCCCGCCGTTTCCAGCGGACG
hu.4-C	1036	TCGGAGTACCAGCTCCCGTACGTCTCGGCTCGGCGCATCAAGGATGCCCTCCCGCCGTTTCCAGCGGACG
rh.54-D	1042	TCGGAGTACCAGCTGCCGTACGTCTCGGCTCGGCGCATCAAGGATGCCCTCCCGCCGTTTCCAGCGGACG
rh.48-D	1042	TCGGAATACCAGCTGCCGTACGTCTCGGCTCGGCGCATCAAGGATGCCCTCCCGCCGTTTCCAGCGGACG
rh.55-D	1042	TCGGAATACCAGCTGCCGTACGTCTCGGCTCGGCGCATCAAGGATGCCCTCCCGCCGTTTCCAGCGGACG
rh.62-D	1042	TCGGAATACCAGCTGCCGTACGTCTCGGCTCGGCGCATCAAGGATGCCCTCCCGCCGTTTCCAGCGGACG
AAV7-D	1042	TCGGAATACCAGCTGCCGTACGTCTCGGCTCGGCGCATCAAGGATGCCCTCCCGCCGTTTCCAGCGGACG
rh.52-E	1045	TCGGAATACCAGCTGCCGTACGTCTCGGCTCGGCGCATCAAGGATGCCCTCCCGCCGTTTCCAGCGGACG
rh.51-E	1045	TCGGAATACCAGCTGCCGTACGTCTCGGCTCGGCGCATCAAGGATGCCCTCCCGCCGTTTCCAGCGGACG
hu.39-E	1045	TCGGAATACCAGCTGCCGTACGTCTCGGCTCGGCGCATCAAGGATGCCCTCCCGCCGTTTCCAGCGGACG
rh.53-E	1045	TCGGAATACCAGCTGCCGTACGTCTCGGCTCGGCGCATCAAGGATGCCCTCCCGCCGTTTCCAGCGGACG
hu.37-E	1045	TCGGAATACCAGCTGCCGTACGTCTCGGCTCGGCGCATCAAGGATGCCCTCCCGCCGTTTCCAGCGGACG
rh.43-E	1042	TCGGAGTACCAGCTGCCGTACGTCTCGGCTCGGCGCATCAAGGATGCCCTCCCGCCGTTTCCAGCGGACG
rh.50-E	1045	TCGGAATACCAGCTGCCGTACGTCTCGGCTCGGCGCATCAAGGATGCCCTCCCGCCGTTTCCAGCGGACG
rh.49-E	1045	TCGGAGTACCAGCTGCCGTACGTCTCGGCTCGGCGCATCAAGGATGCCCTCCCGCCGTTTCCAGCGGACG
rh.61-E	1045	TCGGAATACCAGCTGCCGTACGTCTCGGCTCGGCGCATCAAGGATGCCCTCCCGCCGTTTCCAGCGGACG
hu.41-E	1045	TCGGAATACCAGCTGCCGTACGTCTCGGCTCGGCGCATCAAGGATGCCCTCCCGCCGTTTCCAGCGGACG
rh.64-E	1045	TCGGAATACCAGCTGCCGTACGTCTCGGCTCGGCGCATCAAGGATGCCCTCCCGCCGTTTCCAGCGGACG
hu.42-E	1045	TCGGAATACCAGCTGCCGTACGTCTCGGCTCGGCGCATCAAGGATGCCCTCCCGCCGTTTCCAGCGGACG
rh.57-E	1045	TCGGAATACCAGCTGCCGTACGTCTCGGCTCGGCGCATCAAGGATGCCCTCCCGCCGTTTCCAGCGGACG
hu.40-E	1045	TCGGAATACCAGCTGCCGTACGTCTCGGCTCGGCGCATCAAGGATGCCCTCCCGCCGTTTCCAGCGGACG
AAV8-E	1045	TCGGAGTACCAGCTGCCGTACGTCTCGGCTCGGCGCATCAAGGATGCCCTCCCGCCGTTTCCAGCGGACG
rh.58-E	1045	TCGGAATACCAGCTGCCGTACGTCTCGGCTCGGCGCATCAAGGATGCCCTCCCGCCGTTTCCAGCGGACG
rh.40-E	1045	TCGGAATACCAGCTGCCGTACGTCTCGGCTCGGCGCATCAAGGATGCCCTCCCGCCGTTTCCAGCGGACG
hu.67-E	1045	TCGGAATACCAGCTGCCGTACGTCTCGGCTCGGCGCATCAAGGATGCCCTCCCGCCGTTTCCAGCGGACG

FIG. 3AR

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hu.17-E	1045	TCGGAATACCAGTCCCGTACGTCTCGGCTCTGCGCACCAGGGCTGCCCGCCTCCGTTCCCCGGCGGACG	1130	1140	1150	1160	1170	1180	1190
hu.6-E	1045	TCGGAATACCAGTCCCGTACGTCTCGGCTCTGCGCACCAGGGCTGCCCGCCTCCGTTCCCCGGCGGACG							
hu.66-E	1045	TCGGAATACCAGTCCCGTACGTCTCGGCTCCGCGCACCAGGGCTGCCCTCCGTTCCCCGGCGGACG							
rh.38-E	1045	TCGGAATACCAGTCCCGTACGTCTCGGCTCCGCGCACCAGGGCTGCCCTCCGTTCCCCGGCGGACG							
hu.32-F	1042	TCAGACTATCAGTCCCGTACGTCTCGGCTCGGCTCAGAGGGCTGCCCTCCCGCCTCCAGCGGACG							
AAV9/hu	1042	TCAGACTATCAGTCCCGTACGTCTCGGCTCGGCTCAGAGGGCTGCCCTCCCGCCTCCAGCGGACG							
hu.31-F	1042	TCAGACTATCAGTCCCGTACGTCTCGGCTCGGCTCAGAGGGCTGCCCTCCCGCCTCCAGCGGACG							
AAV5	1079	TCTTTACGCTGCCGACGTACGGTTACGCGACGCTGAACCGCGAC---AACACAGAAATCCACCGAGAG	1130	1140	1150	1160	1170	1180	1190
AAV3-3	1106	TCTTCATGGTCCCTCAGTATGGATACCTCACCCCTGAACAACGGA-----AGTCAAGCGGTGGGACG	.... .... .... .... .... .... .... .... .... ....						
AAV4-4	1079	TCTTTATGGTGCCCGCAGTACGGCTACTGTGGACTGGTGACCGGCAACACTTCGCAGCAACAGACTGACAG							
AAV1-A	1109	TGTTTCATGATTCGCGCAATACGGCTACCTGACGCTCAACAATGGC-----AGCCAAGCCGTGGGACG							
hu.46-A	1109	TGTTTCATGATTCGCGCAATACGGCTACCTGACGCTCAACAATGGC-----AGCCAAGCCGTGGGACG							
hu.48-A	1109	TGTTTCATGATTCGCGCAATACGGCTACCTGACGCTCAACAATGGC-----AGCCAAGCCGTGGGACG							
hu.44-A	1109	TGTTTCATGATTCGCGCAATACGGCTACCTGACGCTCAACAATGGC-----AGCCAAGCCGTGGGACG							
hu.43-A	1112	TGTTTCATGATTCGCGCAATACGGCTACCTGACGCTCAACAATGGC-----AGCCAAGCCGTGGGACG							
AAV6-A	1109	TGTTTCATGATTCGCGCAGTACGGCTACCTAACGCTCAACAATGGC-----AGCCAGGCAGTGGGACG							
hu.34-B	1106	TCTTCATGGTGCCACAGTATGGATACCTCACCCCTGAACAACGAG-----AGTCAGGCAGTAGGACG							
hu.47-B	1106	TCTTCATGGTGCCACAGTATGGATACCTCACCCCTGAACAACGAG-----AGTCAGGCAGTAGGACG							
hu.29-B	1106	TCTTCATGGTGCCACAGTATGGATACCTCACCCCTGAACAACGAG-----AGTCAGGCAGTAGGACG							
hu.63-B	1106	TCTTCATGGTGCCACAGTATGGATACCTCACCCCTGAACAACGAG-----AGTCAGGCAGTAGGACG							
hu.56-B	1106	TCTTCATGGTGCCACAGTATGGATACCTCACCCCTGAACAACGAG-----AGTCAGGCAGTAGGACG							
hu.45-B	1106	TCTTCATGGTGCCACAGTATGGATACCTCACCCCTGAACAACGAG-----AGTCAGGCAGTAGGACG							
hu.57-B	1103	TCTTCATGGTGCCACAGTATGGATACCTCACCCCTGAACAACGAG-----AGTCAGGCAGTAGGACG							
hu.35-B	1106	TCTTCATGGTACCACAGTATGGATACCTCACCCCTGAACAACGAG-----AGTCAGGCAGTAGGACG							
hu.58-B	1106	TCTTCATGGTGCCACAGTATGGATACCTCACCCCTGAACAACGAG-----AGTCAGGCAGTAGGACG							
hu.28-B	1106	TCTTCATGGTGCCACAGTATGGATACCTCACCCCTGAACAACGAG-----AGTCAGGCAGTAGGACG							
hu.51-B	1106	TCTTCATGGTGCCACAGTATGGATACCTCACCCCTGAACAACGAG-----AGTCAGGCAGTAGGACG							

FIG. 3A6

hu.19-B	1106	TCTTCATGGTGCCACAGTATGGATACCTCACCCCTGAACAACGGC-----AGTCAGGCGGTAGGACG
hu.49-B	1106	TCTTCATGGTGCCACAGTATGGATACCTCACCCCTGAACAACGGG-----AGTCAGGCGGTAGGACG
hu.52-B	1106	TCTTCATGGTGCCACAGTATGGATACCTCACCCCTGAGCAACGGG-----AGTCAGGCGGTAGGACG
hu.13-B	1106	TCTTCATGGTGCCACAGTATGGATACCTCACCCCTGAACAACGGG-----AGTCAGGCGGTAGGACG
AAV2-B	1106	TCTTCATGGTGCCACAGTATGGATACCTCACCCCTGAACAACGGG-----AGTCAGGCGGTAGGACG
hu.20-B	1106	TCTTCATGGTGCCACAGTATGGATACCTCACCCCTGAACAACGGC-----AGTCAGGCGGTAGGACG
hu.24-B	1106	TCTTCATGGTGCCACAGTATGGATACCTCACCCCTGAACAACGGC-----AGTCAGGCGGTAGGACG
hu.64-B	1106	TCTTCATGGTGCCACAGTATGGATACCTCACCCCTGAACAACGGG-----AGTCAGGCGGTAGGACG
hu.27-B	1106	TCTTCATGGTGCCACAGTATGGATACCTCACCCCTGAACAACGGC-----AGTCAGGCGGTAGGACG
hu.21-B	1106	TCTTCATGGTGCCACAGTATGGATACCTCACCCCTGAACAACGGC-----AGTCAGGCGGTAGGACG
hu.22-B	1106	TCTTCATGGTGCCACAGTATGGATACCTCACCCCTGAACAACGGC-----AGTCAGGCGGTAGGACG
hu.23-B	1106	TCTTCATGGTGCCACAGTATGGATACCTCACCCCTGAACAACGGC-----AGTCAGGCGGTAGGACG
hu.7-C	1106	TCTTCATGGTGCCACAGTATGGATACCTCACCCCTGAACAACGGG-----AGTCAGGCGGTAGGACG
hu.61-C	1106	TCTTCATGGTGCCACAGTATGGATACCTCACCCCTGAACAACGGG-----AGTCAGGCGGTAGGACG
rh.56-C	1106	TCTTCATGGTGCCACAGTATGGATACCTCACCCCTGAACAACGGG-----AGTCAGGCGGTAGGACG
hu.9-C	1106	TCTTCATGGTGCCACAGTATGGATACCTCACCCCTGAACAACGGG-----AGTCAGGCGGTAGGACG
hu.54-C	1106	TCTTCATGGTGCCACAGTATGGATACCTCACCCCTGAACAACGGG-----AGTCAGGCGGTAGGACG
hu.53-C	1106	TCTTCATGGTGCCACAGTATGGATACCTCACCCCTGAACAACGGG-----AGTCAGGCGGTAGGACG
hu.60-C	1106	TCTTCATGGTGCCACAGTATGGATACCTCACCCCTGAACAACGGG-----AGTCAGGCGGTAGGACG
hu.55-C	1106	TCTTCATGGTGCCACAGTATGGATACCTCACCCCTGAACAACGGG-----AGTCAGGCGGTAGGACG
hu.2-C	1106	TCTTCATGGTGCCACAGTATGGATACCTCACCCCTGAACAACGGG-----AGTCAGGCGGTAGGACG
hu.1-C	1106	TCTTCATGGTGCCACAGTATGGATACCTCACCCCTGAACAACGGG-----AGTCAGGCGGTAGGACG
hu.18-C	1106	TCTTCATGGTGCCACAGTATGGATACCTCACCCCTGAACAACGGG-----AGTCAGGCGGTAGGACG
hu.3-C	1109	TCTTCATGGTGCCACAGTATGGATACCTCACCCCTGAACAACGGG-----AGTCAGGCGGTAGGACG
hu.25-C	1106	TCTTCATGGTGCCACAGTATGGATACCTCACCCCTGAACAACGGG-----AGTCAGGCGGTAGGACG
hu.15-C	1106	TCTTCATGGTGCCACAGTATGGATACCTCACCCCTGAACAACGGG-----AGTCAGGCGGTAGGACG
hu.16-C	1106	TCTTCATGGTGCCACAGTATGGATACCTCACCCCTGAACAACGGG-----AGTCAGGCGGTAGGACG
hu.11-C	1106	TCTTCATGGTGCCACAGTATGGATACCTCACCCCTGAACAACGGG-----AGTCAGGCGGTAGGACG
hu.10-C	1106	TCTTCAGGTGCCACAGTATGGATACCTCACCCCTGAACAACGGG-----AGTCAGGCGGTAGGACG
hu.4-C	1106	TCTTCATGGTGCCACAGTATGGATACCTCACCCCTGAACAACGGG-----AGTCAGGCGGTAGGACG

FIG. 3AT

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rh. 54-D	1112	TCTTCATGATTCCCTCAGTACGGGTACCTGACTCTGAACAAATGGC-----AGCCAATCGGTGGGACG
rh. 48-D	1112	TCTTCATGATTCCCCAGTACGGGTACCTGACTCTGAACAAATGGC-----AGCCAATCGGTGGGTGCG
rh. 55-D	1112	TCTTCATGATTCCCCAGTACGGGTACCTGACTCTGAACAAATGGC-----AGCCAATCGGTGGGTGCG
rh. 62-D	1112	TCTTCATGATTCCCCAGTACGGGTACCTGACTCTGAACAAATGAC-----AGCCAATCGGTGGGTGCG
AAV7-D	1112	TCTTCATGATTCCCTCAGTACGGGTACCTGACTCTCAACAAATGGC-----AGTCAGTCTGTGGGACG
rh. 52-E	1115	TCTTCATGATTCCCTCAGTACGGGTACCTGACTCTCCCAACAAACGGT-----AGTCAGGCCCGTGGGACG
rh. 51-E	1115	TCTTCATGATTCCCTCAGTACGGGTACCTGACTCTCAACAAACGGT-----AGTCAGGCCCGTGGGACG
hu. 39-E	1115	TCTTCATGATTCCCTCAGTACGGGTACCTGACTCTCAACAAACGGT-----AGTCAGGCCCGTGGGACG
rh. 53-E	1115	TCTTCATGATTCCCTCAGTACGGGTACCTGACTCTCAACAAACGGT-----AGTCAGGCCCGTGGGACG
hu. 37-E	1115	TCTTCATGATTCCCCAGTACGGGTACCTTACACTGAACAAATGGA-----AGTCAAGGCCGTAGGCCG
rh. 43-E	1112	TGTTTCATGATTCCCCAGTACGGGTACCTTAACACTCAACAAACGGT-----AGTCAGGCCCGTGGGACG
rh. 50-E	1115	TCTTCATGATTCCCTCAGTACGGGTACCTGACTCTCAACAAACGGT-----AGTCAGGCCCGTGGGACG
rh. 49-E	1115	TCTTCATGATTCCCTCAGTACGGGCAACCTGACTCTCAACAAACGGT-----AGTCAGGCCCGTGGGACG
rh. 61-E	1115	TCTTCATGATTCCCTCAGTACGGGTACCTGACTCTCAACAAACGGT-----AGTCAGGCCCGTGGGACG
hu. 41-E	1115	TCTTCATGATTCCCCAGTACGGGTACCTTACACTGAACAAATGGA-----AGTCAAGGCCGTAGGCCG
rh. 64-E	1115	TCTTCATGATTCCCTCAGTACGGGTACCTGACTCTCAACAAACGGT-----AGTCAGGCCCGTGGGACG
hu. 42-E	1115	TCTTCATGATTCCCCAGTACGGGTACCTTACACTGAACAAATGGA-----AGTCAAGGCCGTAGGCCG
rh. 57-E	1115	TCTTCATGATTCCCTCAGTACGGGTACCTGACTCTCAACAAACGGT-----AGTCAGGCCCGTGGGACG
hu. 40-E	1115	TCTTCATGATTCCCCAGTACGGGTACCTTACACTGAACAAATGGA-----AGTCAAGGCCGTAGGCCG
AAV8-E	1115	TGTTTCATGATTCCCCAGTACGGGTACCTTAACACTCAACAAACGGT-----AGTCAGGCCCGTGGGACG
rh. 58-E	1115	TCTTCATGATTCCCTCAGTACGGGTACCTGACTCTCAACAAACGGT-----AGTCAGGCCCGTGGGACG
rh. 40-E	1115	TCTTCATGATTCCCCAGTACGGGTACCTTACACTGAACAAATGGA-----AGTCAAGGCCGTAGGCCG
hu. 67-E	1115	TCTTCATGATTCCCCAGTACGGGTACCTTACACTGAACAAATGGA-----AGTCAAGGCCGTAGGCCG
hu. 17-E	1115	TCTTCATGATTCCCTCAGTACGGGTACCTGACTCTGAACAAACGGC-----AGTCAGGCCCGTGGGCCG
hu. 6-E	1115	TCTTCATGATTCCCTCAGTACGGGTACCTGACTCTGAACAAACGGC-----AGTCAGGCCCGTGGGCCG
hu. 66-E	1115	TCTTCATGATTCCCCAGTACGGGTACCTTACACTGAACAAATGGA-----AGTCAAGGCCGTAGGCCG
rh. 38-E	1115	TCTTCATGATTCCCCAGTACGGGTACCTTACACTGAACAAATGGA-----AGTCAAGGCCGTAGGCCG
hu. 32-F	1112	TTTTTCATGATTCCCTCAGTACGGGTATCTGACGCTTAATGATGGG-----AGCCAGGCCCGTGGGTGCG
AAV9/hu	1112	TTTTTCATGATTCCCTCAGTACGGGTATCTGACGCTTAATGATGGA-----AGCCAGGCCCGTGGGTGCG
hu. 31-F	1112	TTTTTCATGATTCCCTCAGTACGGGTATCTGACGCTTAATGATGGA-----GCCCAGGCCCGTGGGTGCG

FIG. 3AU

	1200	1210	1220	1230	1240	1250	1260
AAV5	.... .... .... .... .... .... .... .... .... ....						
AAV3-3	1146	GAGCAGCTTCTTCTGCCTAGAGTACTTCCCAGCAAGATGCTGAGAACGGGCAACAACACTTTTGAGTTTACC					
AAV4-4	1167	CTCATCCTTTTACTGCCTGGAGTACTTCCCTTCGCAGATGCTAAGGACTGGAAATAAATTCCTCAATTCAGC					
AAV1-A	1149	AAATGCCTTCTACTGCCTGGAGTACTTCCCTTCGCAGATGCTGCGGACTGGCAACAACACTTTGAAATTACG					
hu.46-A	1170	TTCATCCTTTTACTGCCTGGAATATTTCCCTTCTCAGATGCTGAGAACGGGCAACAACACTTTACCTTCAGC					
hu.48-A	1170	TTCATCCTTCTACTGCCTGGAATATTTCCCTTCTCAGATGCTGAGAACGGGCAACAACACTTTACCTTCAGC					
hu.44-A	1170	TTCATCCTTTTACTGCCTGGAATATTTCCCTTCTCAGATGCTGAGAACGGGCAACAACACTTTACCTTCAGC					
hu.43-A	1173	TTCATCCTTTTACTGCCTGGAATATTTCCCTTCTCAGATGCTGAGAACGGGCAACAACACTTTACCTTCAGC					
AAV6-A	1170	GTCATCCTTTTACTGCCTGGAATATTTCCCATCGCAGATGCTGAGAACGGGCAATAACTTTACCTTCAGC					
hu.34-B	1167	CTCTTCATTTTACTGCCTGGAGTACTTTCCCTTCTCAGATGCTGCGTACCGGAAACAACACTTTACCTTCAGC					
hu.47-B	1167	CTCTTCATTTTACTGCCTGGAGTACTTTCCCTTCTCAGATGCTGCGTACCGGAAACAACACTTTACCTTCAGC					
hu.29-B	1167	CTCTTCATTTTACTGCCTAGGAGTACTTTCCCTTCTCAGATGCTGCGTACCGGAAACAACACTTTACCTTCAGC					
hu.63-B	1167	CTCTTCATTTTACTGCCTGGAGTACTTTCCCTTCTCAGATGCTGCGTACCGGAAACAACACTTTACCTTCAGC					
hu.56-B	1167	CTCTTCCTTTTACTGCCTGGAGTACTTTCCCTTCTCAGATGCTTGCACCGGAAACAACACTTTACCTTCAGC					
hu.45-B	1167	CTCTTCATTTTACTGCCTGGAGTACTTTCCCTTCTCAGATGCTGCGTACCGGAAACAACACTTTACCTTCAGC					
hu.57-B	1164	CTCTTCCTTTTACTGCCTGGAGTACTTTCCCTTCTCAGATGCTTCCCTTCTCAGATGCTTACCTTCAGC					
hu.35-B	1167	CTCTTCATTTTACTGCCTGGAGTACTTTCCCTTCTCAGATGCTGCGTACCGGAAACAACACTTTACCTTCAGC					
hu.58-B	1167	CTCTTCATTTTACTGCCTGGAGTACTTTCCCTTCTCAGATGCTGCGTACCGGAAACAACACTTTACCTTCAGC					
hu.28-B	1167	CTCTTCATTTTACTGCCTAGAGTACTTTCCCTTCTCAGATGCTGCGTACCGGAAACAACACTTTACCTTCAGC					
hu.51-B	1167	CTCTTCATTTTACTGCCTGGAGTACTTTCCCTTCTCAGATGCTGCGTACCGGAAACAACACTTTACCTTCAGC					
hu.19-B	1167	CTCTTCCTTTTACTGCCTGGAGTACTTTCCCTTCTCAGATGCTTCCCTTCTCAGATGCTTACCTTCAGC					
hu.49-B	1167	CTCTTCATTTTACTGCCTGGAGTACTTTCCCTTCTCAGATGCTTCCCTTCTCAGATGCTTACCTTCAGC					
hu.52-B	1167	CTCTTCATTTTACTGCCCGGAGTACTTTCCCTTCTCAGATGCTGCGTACCGGAAACAACACTTTACCTTCAGC					
hu.13-B	1167	CTCTTCATTTTACTGCCTGGAGTACTTTCCCTTCTCAGATGCTGCGTACCGGAAACAACACTTTACCTTCAGC					
AAV2-B	1167	CTCTTCATTTTACTGCCTGGAGTACTTTCCCTTCTCAGATGCTGCGTACCGGAAACAACACTTTACCTTCAGC					
hu.20-B	1167	CTCTTCCTTTTACTGCCTGGAGTACTTTCCCTTCTCAGATGCTTCCCTTCTCAGATGCTTACCTTCAGC					
hu.24-B	1167	CTCTTCCTTTTACTGCCTGGAGTACTTTCCCTTCTCAGATGCTTCCCTTCTCAGATGCTTACCTTCAGC					

FIG. 3AV

hu.64-B 1167 CTCCTTCATTTTACTGCCTGGAGTACTTTCCCTTCTCAGATGCTGCGTACCCGAAACAACATTTACCTTCAGC  
 hu.27-B 1167 CTCCTTCCTTTTACTGCCTGGAGTACTTTCCCTTCTCAGATGCTTCGTAACCCGAAACAACATTTACCTTCAGC  
 hu.21-B 1167 CTCCTTCCTTTTACTGCCTGGAGTACTTTCCCTTCTCAGATGCTTCGTAACCCGAAACAACATTTACCTTCAGC  
 hu.22-B 1167 CTCCTTCCTTTTACTGCCTGGAGTACTTTCCCTTCTCAGACGCTTCGTAACCCGAAACAACATTTACCTTCAGC  
 hu.23-B 1167 CTCCTTCCTTTTACTGCCTGGAGTACTTTCCCTTCTCAGATGCTTCGTAACCCGAAACAACATTTACCTTCAGC  
 hu.7-C 1167 CTCCTTCCTTTTACTGCCTGGAGTACTTTCCCTTCTCAGATGCTTCGTAACCCGAAACAACATTTACCTTCAGC  
 hu.61-C 1167 CTCCTTCATTTTACTGCCTGGAGTACTTTCCCTTCTCAGATGCTTCGTAACCCGAAACAACATTTACCTTCAGC  
 rh.56-C 1167 CTCCTTCCTTTTACTGCCTGGAGTACTTTCCCTTCTCAGATGCTTCGTAACCCGAAACAACATTTACCTTCAGC  
 hu.9-C 1167 CTCCTTCCTTTTACTGCCTGGAGTACTTTCCCTTCTCAGATGCTTCGTAACCCGAAACAACATTTACCTTCAGC  
 hu.54-C 1167 CTCCTTCCTTTTACTGCCTGGAGTACTTTCCCTTCTCAGATGCTTCGTAACCCGAAACAACATTTACCTTCAGC  
 hu.53-C 1167 CTCCTTCCTTTTACTGCCTGGAGTACTTTCCCTTCTCAGATGCTTCGTAACCCGAAACAACATTTACCTTCAGC  
 hu.60-C 1167 CTCCTTCATTTTACTGCCTGGAGTACTTTCCCTTCTCAGATGCTTCGTAACCCGAAACAACATTTACCTTCAGC  
 hu.55-C 1167 CTCCTTCCTTTTACTGCCTGGAGTACTTTCCCTTCTCAGATGCTTCGTAACCCGAAACAACATTTACCTTCAGC  
 hu.2-C 1167 CTCCTTCCTTTTACTGCCTGGAGTACTTTCCCTTCTCAGATGCTTCGTAACCCGAAACAACATTTACCTTCAGC  
 hu.1-C 1167 CTCCTTCCTTTTACTGCCTGGAGTACTTTCCCTTCTCAGATGCTTCGTAACCCGAAACAACATTTACCTTCAGC  
 hu.18-C 1167 CTCCTTCCTTTTACTGCCTGGAGTACTTTCCCTTCTCAGATGCTTCGTAACCCGAAACAACATTTACCTTCAGC  
 hu.3-C 1170 CTCCTTCCTTTTACTGCCTGGAGTACTTTCCCTTCTCAGATGCTTCGTAACCCGAAACAACATTTACCTTCAGC  
 hu.25-C 1167 CTCCTTCCTTTTACTGCCTGGAGTACTTTCCCTTCTCAGATGCTTCGTAACCCGAAACAACATTTACCTTCAGC  
 hu.15-C 1167 CTCCTTCCTTTTACTGCCTGGAGTACTTTCCCTTCTCAGATGCTTCGTAACCCGAAACAACATTTACCTTCAGC  
 hu.16-C 1167 CTCCTTCCTTTTACTGCCTGGAGTACTTTCCCTTCTCAGATGCTTCGTAACCCGAAACAACATTTACCTTCAGC  
 hu.11-C 1167 CTCCTTCCTTTTACTGCCTGGAGTACTTTCCCTTCTCAGATGCTTCGTAACCCGAAACAACATTTACCTTCAGC  
 hu.10-C 1167 CTCCTTCCTTTTACTGCCTGGAGTACTTTCCCTTCTCAGATGCTTCGTAACCCGAAACAACATTTACCTTCAGC  
 hu.4-C 1167 CTCCTTCCTTTTACTGCCTGGAGTACTTTCCCTTCTCAGATGCTTCGTAACCCGAAACAACATTTACCTTCAGC  
 rh.54-D 1173 TTCATCCTTCTACTGCCTGGAAATATTTCCCTTCTCAGAGTGTGAGAACGGGTAAACAACATTCACCTTCAGT  
 rh.48-D 1173 TTCCTCTTTCTACTGCCTGGAAATATTTCCCTTCTCAGAACTGTGAGAACGGGCAACAACATTCACCTTCAGC  
 rh.55-D 1173 TTCCTCTTTCTACTGCCTGGAAATATTTCCCTTCTCAGAACTGTGAGAACGGGCAACAACATTCACCTTCAGC  
 rh.62-D 1173 TTCCTCTTTCTACTGCCTGGAAATATTTCCCTTCTCAGAACTGTGAGAACGGGCAACAACATTCACCTTCAGC  
 AAV7-D 1173 TTCCTCCTTCTACTGCCTGGAGTACTTTCCCTTCTCAGATGCTGAGAACGGGCAACAACATTTGAGTTCAGC  
 rh.52-E 1176 TTCCTCCTTCTACTGCCTGGAGTACTTTCCCTTCTCAGATGCTGAGAACGGGCAACAACATTTTCCTTCAGC  
 rh.51-E 1176 TTCCTCCTTCTACTGCCTGGAGTACTTTCCCTTCTCAGATGCTGAGAACGGGCAACAACATTTTCCTTCAGC

FIG. 3AW

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hu.39-E	1176	TTCCCTCCTTCTACTGCCTGGAGTACTTCCCTCTCAGATGCTGAGAACGGGCAACAACATTTTCCTTCAGC	1270	1280	1290	1300	1310	1320	1330
rh.53-E	1176	TTCCCTCCTTCTACTGCCTGGAGTACTTCCCTCTCAGATGCTGAGAACGGGCAACAACATTTTCCTTCAGC	..... ..... ..... ..... ..... ..... ..... ..... ..... .....						
hu.37-E	1176	TTCCCTCCTTCTACTGCCTGGAAATATTTCCATCTCAAAATGCTGCAACTGGAAACAATTTTGAATTCAGC	1216	TACAACTTTGAGGAGGTGCCCCCTCCACTCCAGCTTCGCTCCCAGTCAGAACCTGTTCAAGCTGGCCCAACC					
rh.43-E	1173	CTCCCTCCTTCTACTGCCTGGAAATACTTTCCCTCGCAGATGCTGAGAACCGGCAACAACATTTCCAGTTTACT	1237	TATACCTTCGAGGATGTACCTTTTTCACAGCAGCTACGCTCACAGCCAGAGTTTGGATCGCTTGATGAATC					
rh.50-E	1176	TTCCCTCCTTCTACTGCCTGGAGTACTTCCCTCTCAGATGCTGAGAACGGGCAACAACATTTTCCTTCAGC	1219	TACAGTTTGTAGAAAGGTGCCCTTTCCACTCGATGTACGCGCACAGCCAGAGCCTGGACCGGTGATGAACC					
rh.49-E	1176	TTCCCTCCTTCTACTGCCTGGAGTACTTCCCTCTCAGATGCTGAGAACGGGCAACAACATTTTCCTTCAGC	1240	TACACCTTTGAGGAAGTGCCCTTTCCACAGCAGCTACGCGCACAGCCAGAGCCTGGACCGGTGATGAATC					
rh.61-E	1176	TTCCCTCCTTCTACTGCCTGGAGTACTTCCCTCTCAGATGCTGAGAACGGGCAACAACATTTTCCTTCAGC							
hu.41-E	1176	TTCCCTCCTTCTACTGCCTGGAGTACTTCCCTCTCAGATGCTGAGAACGGGCAACAACATTTTCCTTCAGC							
rh.64-E	1176	TTCCCTCCTTCTACTGCCTGGAAATATTTTCCATCTCAAAATGCTGCAACTGGAAACAATTTTGAATTCAGC							
hu.42-E	1176	TTCCCTCCTTCTACTGCCTGGAGTACTTCCCTCTCAGATGCTGAGAACGGGCAACAACATTTTCCTTCAGC							
rh.57-E	1176	TTCCCTCCTTCTACTGCCTGGAAATATTTTCCATCTCAAAATGCTGCGAACTGGAAACAATTTTGAATTCAGC							
hu.40-E	1176	TTCCCTCCTTCTACTGCCTGGAGTACTTCCCTCTCAGATGCTGAGAACGGGCAACAACATTTTCCTTCAGC							
AAV8-E	1176	CTCCCTCCTTCTACTGCCTGGAAATACTTTCCCTCGCAGATGCTGAGAACCGGCAACAACATTTCCAGTTTACT							
rh.58-E	1176	TTCCCTCCTTCTACTGCCTGGAGTACTTCCCTCTCAGATGCTGAGAACGGGCAACAACATTTTCCTTCAGC							
rh.40-E	1176	TTCCCTCCTTCTACTGCCTGGAAATATTTTCCATCTCAAAATGCTGCAACTGGAAACAATTTTGAATTCAGC							
hu.67-E	1176	TTCCCTCCTTCTACTGCCTGGAAATATTTTCCATCTCAAAATGCTGCGAACTGGAAACAATTTTGAATTCAGC							
hu.17-E	1176	TTCCCTCCTTCTACTGCCTGGAGTACTTTTCCCTCTCAAAATGCGGAGAACGGGCAACAACATTTGAGTTTCAGC							
hu.6-E	1176	TTCCCTCCTTCTACTGCCTGGAGTACTTTCCCTCTCAAAATGCGGAGAACGGGCAACAACATTTGAGTTTCAGC							
hu.66-E	1176	TTCCCTCCTTCTACTGCCTGGAAATATTTTCCATCTCAAAATGCTGCGAACTGGAAACAATTTTGAATTCAGC							
rh.38-E	1176	TTCCCTCCTTCTACTGCCTGGAAATATTTTCCATCTCAAAATGCTGCGAACTGGAAACAATTTTGAATTCAGC							
hu.32-F	1173	TTCGTCCCTTTTACTGCCTGGAAATATTTCCCGTCGCAAAATGCTAAGAACGGGTAAACAACATTCAGTTTCAGC							
AAV9/hu	1173	TTCGTCCCTTTTACTGCCTGGAAATATTTCCCGTCGCAAAATGCTAAGAACGGGTAAACAACATTCAGTTTCAGC							
hu.31-F	1173	TTCGTCCCTTTTACTGCCTGGAAATATTTCCCGTCGCAAAATGCTAAGAACGGGTAAACAACATTCAGTTTCAGC							

FIG. 3AX



hu.46-A 1240 TACACCTTTGAGGAAGTGCCTCTCCACAGCAGCTGGCGGCACAGCCAGAGCCTGGACCGGCTGATGAATC  
 hu.48-A 1240 TACACCTTTGAGGAAGTGCCTTTCCACAGCAGCTACGCGCACAGCCAGAGCCTGGACCGGCTGATGAATC  
 hu.44-A 1240 TACACCTTTGAGGAAGTGCCTTTCCACAGCAGCTACGCGCACAGCCAGAGCCTGGACCGGCTGATGAATC  
 hu.43-A 1243 TACACCTTTGAGGAAGTGCCTCTCCACAGCAGCTACGCGCACAGCCAGAGCCTGGACCGGCTGATGAATC  
 AAV6-A 1240 TACACCTTCGAGGACGTGCCTTTCCACAGCAGCTACGCGCACAGCCAGAGCCTGGACCGGCTGATGAATC  
 hu.34-B 1237 TACACCTTTGAGGACGTTCCTTTCCACAGCAGCTACGCTCACAGCCAGAGTCTGGCCGCTCTCATGAATC  
 hu.47-B 1237 TACACCTTTGAGGACGTTCCTTTCCACAGCAGCTACGCTCACAGCCAGAGTCTGGACCGTCTCATGAATC  
 hu.29-B 1237 TACACCTTTGAGGACGTTCCTTTCCACAGCAGCTACGCTCACAGCCAGAGTCTGGACCGTCTCATGAATC  
 hu.63-B 1237 TACACCTTTGAGGACGTTCCTTTCCACAGCAGCTACGCTCACAGCCAGAGTCTGGACCGTCTCATGAATC  
 hu.56-B 1237 TACACCTTTGAGGACGTTCCTTTCCACAGCAGCTACGCTCACAGTCAAAGTCTGGACCGTCTCATGAATC  
 hu.45-B 1237 TACACCTTTGAGGACGTTCCTTTCCACAGCAGCTACGCTCACAGCCAGAGTCTGGACCGTCTCATGAATC  
 hu.57-B 1234 TACACCTTTGAGGACGTTCCTTTCCACAGCAGCTACGCTCACAGCCAGAGTCTGGACCGTCTCATGAATC  
 hu.35-B 1237 TACACCTTTGAGGACGTTCCTTTCCACAGCAGCTACGCTCACAGCCAGAGTCTGGACCGTCTCATGAATC  
 hu.58-B 1237 TACACCTTTGAGGACGTTCCTTTCCACAGCAGCTACGCTCACAGCCAGAGTCTGGACCGTCTCATGAATC  
 hu.28-B 1237 TACACCTTTGAGGACGTTCCTTTCCACAGCAGCTACGCTCACAGCCAGAGTCTGGACCGTCTCATGAATC  
 hu.51-B 1237 TACACCTTTGAGGACGTTCCTTTCCACAGCGGCTACGCTCACAGCCAGAGTCTGGACCGTCTCATGAATC  
 hu.19-B 1237 TACACCTTTGAGGACGTTCCTTTCCATAGCAGCTACGCTCACAGCCAAAGTCTGGACCGTCTCATGAATC  
 hu.49-B 1237 TACACCTTTGAGGATGTTCCTTTCCACAGCAGCTACGCTCACAGCCAGAGTCTGGACCGTCTCATGAATC  
 hu.52-B 1237 TACACCTTTGAGGACGTTCCTTTCCACAGCAGCTACGCTCACAGCCAGAGTCTGGACCGTCTCATGAATC  
 hu.13-B 1237 TACACCTTTGAGGACGTTCCTTTCCACAGCAGCTACGCTCACAGCCAGAGTCTGGACCGTCTCATGAATC  
 AAV2-B 1237 TACACCTTTGAGGACGTTCCTTTCCACAGCAGCTACGCTCACAGCCAGAGTCTGGACCGTCTCATGAATC  
 hu.20-B 1237 TACACCTTTGAGGACGTTCCTTTCCACAGCAGCTACGCTCACAGCCAGAGTCTGGACCGTCTCATGAATC  
 hu.24-B 1237 TACACCTTTGAGGACGTTCCTTTCCATAGCAGCTACGCTCACAGCCAAAGTCTGGACCGTCTCATGAATC  
 hu.64-B 1237 TACACCTTTGAGGACGTTCCTTTCCACAGCAGCTACGCTCACAGCCAGAGTCTGGACCGTCTCATGAATC  
 hu.27-B 1237 TACACCTTTGAGGACGTTCCTTTCCATAGCAGCTACGCTCACGGCCAAAGTCTGGACCGTCTCATGAATC  
 hu.21-B 1237 TACACCTTTGAGGACGTTCCTTTCCATAGCAGCTACGCTCACAGCCAAAGTCTGGACCGTCTCATGAATC  
 hu.22-B 1237 TACACCTTTGAGGACGTTCCTTTCCATAGCAGCTACGCTCACAGCCAAAGTCTGGACCGTCTCATGAATC  
 hu.23-B 1237 TACACCTTTGAGGACGTTCCTTTCCATAGCAGCTACGCTCACAGCCAAAGTCTGGACCGTCTCATGAATC  
 hu.7-C 1237 TACACCTTTGAGGACGTTCCTTTCCACAGCAGCTACGCTCACAGCCAGAGTCTGGATCGGCTGATGAATC  
 hu.61-C 1237 TACACCTTTGAGGACGTGCCTTTCCACAGCAGCTACGCTCACAGCCAGAGTCTGGATCGGCTGATGAATC

FIG. 3AY

rh. 56-C	1237	TACACCTTTGAAGACGTTCCCTTTCCACAGCAGCTACGCTCACAGCCAGAGTCTGGATCGGCTGATGAATC
hu. 9-C	1237	TACACCTTTGAGGACGTTCCCTTTCCACAGCAGCTACGCTCACAGCCAGAGTTTGGACCGGCTGATGAATC
hu. 54-C	1237	TACACTTTTGAAGACGTGCCCTTTCCACAGCAGCTACGCTCACAGCCAGGGTTTGGATCGGCTGATGAATC
hu. 53-C	1237	TACACTTTTGAAGACGTGCCCTTTCCACAGCAGCTACGCTCACAGCCAGAGTTTGGATCGGCTGATGAATC
hu. 60-C	1237	TACACTTTTGAAGACGTGCCCTTTCCACAGCAGCTACGCTCACAGCCAGAGTCTGGATCGGCTGATGAATC
hu. 55-C	1237	TACACTTTTGAAGACGTGCCCTTTCCACAGCAGCTACGCTCACAGCCAGAGTTTGGATCGGCTGATGAATC
hu. 2-C	1237	TACACTTTTGAAGACGTGCCCTTTCCACAGCAGCTACGCTCACAGCCAGAGTCTGGATCGGCTGATGAATC
hu. 1-C	1237	TACACTTTTGAAGACGTGCCCTTTCCACAGCAGCTACGCTCACAGCCAGAGTCTGGATCGGCTGATGAATC
hu. 18-C	1237	TACACTTTTGAAGACGTGCCCTTTCCACAGCAGCTACGCTCACAGCCAGAGTCTGGATCGGCTGATGAATC
hu. 3-C	1240	TACACTTTTGAAGACGTGCCCTTTCCACAGCAGCTACGCTCACTGCCAGAGTCTGGATCGGCTGATGAATC
hu. 25-C	1237	TACACTTTTGAAGACGTGCCCTTTCCACAGCAGCTACGCTCACAGCCAGAGTCTGGATCGGCTGATGAATC
hu. 15-C	1237	TACACCTTTGAAGACGTTCCCTTTCCACAGCAGCTACGCTCACAGCCAGAGTCTGGATCGGCTGATGAATC
hu. 16-C	1237	TACACCTTTGAAGACGTTCCCTTTCCACAGCAGCTACGCTCACAGCCAGAGTCTGGATCGGCTGATGAATC
hu. 11-C	1237	TACACCTTTGAGGACGTTCCCTTTCCACAGCAGCTACGCTCACAGCCAGAGTTTGGACCGGCTGATGAATC
hu. 10-C	1237	TACACCTTTGAGGACGTTCCCTTTCCACAGCAGCTACGCTCACAGCCAGAGTTTGGACCGGCTGATGAATC
hu. 4-C	1237	TACACTTTTGAAGACGTGCCCTTTCCACAGCAGCTACGCTCACAGCCAGAGTCTGGATCGGCTGATGAATC
rh. 54-D	1243	TACACCTTCGAGGACGTGCCCTTTCCACAGCAGCTACGCGCACAGCCAGAGCTAGACCGGCTGATGAATC
rh. 48-D	1243	TACACCTTCGAGGACGTTCCCTTTCCACAGCAGCTACGCGCACAGCCAGAGCTTGGACCGGCTGATGAATC
rh. 55-D	1243	TACACCTTCGAGGACGTTCCCTTTCCACAGCAGCTACGCGCACAGCCAGAGCTTGGACCGGCTGATGAATC
rh. 62-D	1243	TACACCTTCGAGGACGTTCCCTTTCCACAGCAGCTACGCGCACAGCCAGAGCTTGGACCGGCTGATGAATC
AAV7-D	1243	TACAGCTTCGAGGACGTGCCCTTTCCACAGCAGCTACGCGCACAGCCAGAGCTTGGACCGGCTGATGAATC
rh. 52-E	1246	TACACTTTTCGAGGACGTGCCCTTTCCACAGCAGCTACGCGCACAGCCAGAGTTTGGACAGGCTGATGAATC
rh. 51-E	1246	TACACTTTTCGAGGACGTGCCCTTTCCACAGCAGCTACGCGCACAGCCAGAGTTTGGACAGGCTGATGAATC
hu. 39-E	1246	TACACTTTTCGAGGACGTGCCCTTTCCACAGCAGCTACGCGCACAGCCAGAGTTTGGACAGGCTGATGAATC
rh. 53-E	1246	TACACTTTTCGAGGACGTGCCCTTTCCACAGCAGCTACGCGCACAGCCAGAGTTTGGACAGGCTGATGAATC
hu. 37-E	1246	TACACCTTCGAGGACGTGCCCTTTCCACAGCAGCTACGCGCACAGCCAGAGCTTGGACCGACTGATGAATC
rh. 43-E	1243	TACACCTTCGAGGACGTGCCCTTTCCACAGCAGCTACGCGCACAGCCAGAGCTTGGACCGGCTGATGAATC
rh. 50-E	1246	TACACTTTTCGAGGACGTGCCCTTTCCACAGCAGCTACGCGCACAGCCAGAGTTTGGACAGGCTGATGAATC
rh. 49-E	1246	TACACTTTTCGAGGACGTGCCCTTTCCACAGCAGCTACGCGCACAGCCAGAGTTTGGACAGGCTGATGAATC
rh. 61-E	1246	TACCTTTTCGAGGACGTGCCCTTTCCACAGCAGCTACGCGCACAGCCAGAGTTTGGACAGGCTGATGAATC

FIG. 3A2

hu. 41-E	1246	TACACCTTCGAGGACGTGCCCTTTCCACAGCAGCTACGCCACACAGCCAGAGCTTGGACCGACTGATGAATC	1340	1350	1360	1370	1380	1390	1400
rh. 64-E	1246	TACACTTTCGAGGACGTGCCCTTTCCACAGCAGCTACGCCACACAGCCAGAGTTTGGACAGGCTGATGAATC							
hu. 42-E	1246	TACACCTTCGAGGACGTGCCCTTTCCACAGCAGCTACGCCACACAGCCAGAGCTTGGACCGACTGATGAATC							
rh. 57-E	1246	TACACTTTCGAGGACGTGCCCTTTCCACAGCAGCTACGCCACACAGCCAGAGTTTGGACAGGCTGATGAATC							
hu. 40-E	1246	TACACCTTCGAGGACGTGCCCTTTCCACAGCAGCTACGCCACACAGCCAGAGCTTGGACCGACTGATGAATC							
AAV8-E	1246	TACACCTTCGAGGACGTGCCCTTTCCACAGCAGCTACGCCACACAGCCAGAGCTTGGACCGGCTGATGAATC							
rh. 58-E	1246	TACACTTTCGAGGACGTGCCCTTTCCACAGCAGCTACGCCACACAGCCAGAGTTTGGACAGGCTGATGAATC							
rh. 40-E	1246	TACACCTTCGAGGACGTGCCCTTTCCACAGCAGCTACGCCACACAGCCAGAGCTTGGACCGACTGATGAATC							
hu. 67-E	1246	TACACCTTCGAGGACGTGCCCTTTCCACAGCAGCTACGCCACACAGCCAGAGCTTGGACCGACTGATGAATC							
hu. 17-E	1246	TACCAGTTTGAGGACGTGCCCTTTTCACAGCAGCTACGCCATAGCCAAAGCCTGGACCGGCTGATGAACC							
hu. 6-E	1246	TACCAGTTTGAGGACGTGCCCTTTTCACAGCAGCTACGCCATAGCCAAAGCCTGGACCGGCTGATGAACC							
hu. 66-E	1246	TACACCTTCGAGGACGTGCCCTTTCCACAGCAGCTACGCCACACAGCCAGAGCTCGGACCGACTGATGAATC							
rh. 38-E	1246	TACACCTTCGAGGACGTGCCCTTTCCACAGCAGCTACGCCACACAGCCAGAGCTTGGACCGACTGATGAATC							
hu. 32-F	1243	TACGAGTTTGAGAACGTACCTTTCCATAGCAGCTACGCTACAGCCAAAGCCTGGACCGACTAATGAATC							
AAV9/hu	1243	TACGAGTTTGAGAACGTACCTTTCCATAGCAGCTACGCTACAGCCAAAGCCTGGACCGACTAATGAATC							
hu. 31-F	1243	TACGAGTTTGAGAACGTACCTTTCCATAGCAGCTACGCTACAGCCAAAGCCTGGACCGACTAATGAATC							
		.... .... .... .... .... .... .... .... .... .... .... .... .... ....							
AAV5	1286	CGCTGGTGGACCACTACTGTACCGCTTCGTGAGCACAAAT-----AACACTGG							
AAV3-3	1307	CTCTTATTGATCAGTATCTGTACTACCTGAACAGAACGCAAGGAACAACCTCTGGAACAACCAACCAATC							
AAV4-4	1289	CTCTCATCGACCACTACCTGTGGGACTGCAATCGACCACCAACCGGAACCACTTGAATGCCGGGACTGC							
AAV1-A	1310	CTCTCATCGACCAATACCTGTATTACCTGAACAGAACTCAA--AATCAGTCCGGAAGTCCCCAAACAA							
hu. 46-A	1310	CTCTCATCGACCAATACCTGTATTACCTGAACAGAACTCAA--AATCAGTCCGGAAGTCCCCAAACAG							
hu. 48-A	1310	CTCTCATCGACCAATACCTGTATTACCTGAACAGAACTCAA--AATCAGTCCGGAAGTCCCCAAACAA							
hu. 44-A	1310	CTCTCATCGACCAATACCTGTATTACCTGAACAGAACTCAA--AATCAGTCCGGAAGTCCCCAAACAA							
hu. 43-A	1313	CTCTCATCGTCCAATACCTGTATTACCTGAACAGAACTCAA--AATCAGTCCGGAAGTCCCCAAACAA							
AAV6-A	1310	CTCTCATCGACCACTACCTGTATTACCTGAACAGAACTCAG--AATCAGTCCGGAAGTCCCCAAACAA							
hu. 34-B	1307	CTCTCATCGACCACTACCTGTATTACTTGAGCAGAAACAAAC---ACTCCAAGTGAACCAACCGCAGTC							
hu. 47-B	1307	CTCTCATCGACCACTACCTGTATTACTTGAGCAGAAACAAAC---ACTCCAAGTGAACCAACCGCAGTC							

hu.29-B 1307 CTCTCATCGACCGTACCTGTATTACTTGAGCAGAAACAAAC---ACTCCAAGCGGAACCAACCAACGCAGTC  
 hu.63-B 1307 CTCTCATCGACCGTACCTGTATTACTTGAGCAGAAACAAAC---ACTCCAAGCGGAACCAACCAACGCAGTC  
 hu.56-B 1307 CTCTCATCGACCGTACCTGTATTACTTGAGCAGAAACAAAC---ACTCCAAGCGGAACCAACCAACGCAGTC  
 hu.45-B 1307 CTCTCATCGACCGTACCTGTATTACTTGAGCAGAAACAAAC---ACTCCAAGTGAACCAACCAACGCAGTC  
 hu.57-B 1304 CTCTCATCGACCGTACCTGTATTACTTGAGCAGAAACAAAC---ACTCCAAGCGGAACCAACCAACGCAGTC  
 hu.35-B 1307 CTCTCATCGACCGTACCTGTATTACTTGAGCAGAAACAAAC---ACTCCAAGTGAACCAACCAACGCAGTC  
 hu.58-B 1307 CTCTCATCGACCGTACCTGTATTACTTGAGCAGAAACAAAC---ACTCCAAGCGGAACCAACCAACGCAGTC  
 hu.28-B 1307 CTCTCATCGACCGTACCTGTATTACTTGAGCAGAAACAAAC---ACTCCAAGCGGAACCAACCAACGCAGTC  
 hu.51-B 1307 CTCTCATCGACCGTACCTGTATTACTTGAGCAGAAACAAAC---ACTCCAAGTGAACCAACCAACGCAGTC  
 hu.19-B 1307 CTCTCATCGACCGTACCTGTATTACTTGAGCAGAAACAAAC---ACTCCAAGCGGAACCAACCAACGCAGTC  
 hu.49-B 1307 CTCTCATCGACCGTACCTGTATTACTTGAGCAGAAACAAAC---ACTCCAAGCGGAACCAACCAACGCAGTC  
 hu.52-B 1307 CTCTCATCGACCGTACCTGTATTACTTGAGCAGAAACAAAC---ACTCCAAGCGGAACCAACCAACGCAGTC  
 hu.13-B 1307 CTCTCATCGACCGTACCTGTATTACTTGAGCAGAAACAAAC---ACTCCAAGTGAACCAACCAACGCAGTC  
 AAV2-B 1307 CTCTCATCGACCGTACCTGTATTACTTGAGCAGAAACAAAC---ACTCCAAGCGGAACCAACCAACGCAGTC  
 hu.20-B 1307 CTCTCATCGACCGTACCTGTATTACTTGAGCAGAAACAAAC---ACTCCAAGTGAACCAACCAACGCAGTC  
 hu.24-B 1307 CTCTCATCGACCGTACCTGTATTACTTGAGCAGAAACAAAC---ACTCCAAGCGGAACCAACCAACGCAGTC  
 hu.64-B 1307 CTCTCATCGACCGTACCTGTATTACTTGAGCAGAAACAAAC---ACTCCAAGCGGAACCAACCAACGCAGTC  
 hu.27-B 1307 CTCTCATCGACCGTACCTGTATTACTTGAGCAGAAACAAAC---ACTCCAAGCGGAACCAACCAACGCAGTC  
 hu.21-B 1307 CTCTCATCGACCGTACCTGTATTACTTGAGCAGAAACAAAC---ACTCCAAGCGGAACCAACCAACGCAGTC  
 hu.22-B 1307 CTCTCATCGACCGTACCTGTATTACTTGAGCAGAAACAAAC---ACTCCAAGCGGAACCAACCAACGCAGTC  
 hu.23-B 1307 CTCTCATCGACCGTACCTGTATTACTTGAGCAGAAACAAAC---ACTCCAAGCGGAACCAACCAACGCAGTC  
 hu.7-C 1307 CTCTCATCGACCGTACCTGTATTACTTGAGCAGAAACAAAC---TCAAATAGTGAACCTCTTCAGCAGTC  
 hu.61-C 1307 CTCTCATCGACCGTACCTGTATTACTTGAGCAGAAACAAAC---ACAAATAGTGAACCTCTTCAGCAGTC  
 rh.56-C 1307 CTCTCATCGACCGTACCTGTATTACTTGAGCAGAAACAAAC---TCAAATAGTGAACCTCTTCAGCAGTC  
 hu.9-C 1307 CTCTCATCGACCGTACCTGTATTACTTGAGCAGAAACAAAC---TCAAATAGTGAACCTCTTCAGCAGTC  
 hu.54-C 1307 CTCTCATCGACCGTACCTGTATTACTTGAGCAGAAACAAAC---ACAGCTAGTGAACCT---CAGCAGTC  
 hu.53-C 1307 CTCTCATCGACCGTACCTGTATTACTTGAGCAGAAACAAAC---ACAGCTAGTGAACCT---CAGCAGTC  
 hu.60-C 1307 CTCTCATCGACCGTACCTGTATTACTTGAGCAGAAACAAAC---ACAAATAGTGAACCTCTTCAGCAGTC  
 hu.55-C 1307 CTCTCATCGACCGTACCTGTATTACTTGAGCAGAAACAAAC---ACAGCTAGTGAACCT---CAGCAGTC  
 hu.2-C 1307 CTCTCATCGACCGTACCTGTATTACTTGAGCAGAAACAAAC---ACAAATAGTGAACCTCTTCAGCAGTC

FIG. 3BB

hu.1-C	1307	CTCTGATCGACCACTACCTGTATTATCTGAACAAGACACAA---ACAAATAGTGGAACCTCTTCAGCAGTC
hu.18-C	1307	CTCTGATCGACCACTACCTATATATCTGAACAAGACACAA---TCAAATAGTGGAACCTCTTCAGCAGTC
hu.3-C	1310	CTCTGATCGACCACTACCTGTATTATCTGAACAAGACACAA---ACAAATAGTGGAACCTCTTCAGCAGTC
hu.25-C	1307	CTCTGATCGACCACTACCTGTATTATCTGAACAAGACACAA---ACAAATAGTGGAACCTCTTCAGCAGTC
hu.15-C	1307	CTCTGATCGACCACTACCTGTATTATCTGAACAAGACACAA---TCAAATAGTGGAACCTCTTCAGCAGTC
hu.16-C	1307	CTCTGATCGACCACTACCTGTATTATCTGAACAAGACACAA---TCAAATAGTGGAACCTCTTCAGCAGTC
hu.11-C	1307	CTCTGATCGACCACTATCTATATATCTGAACAAGACACAA---TCAAATAGTGGAACCTCTTCAGCAGTC
hu.10-C	1307	CTCTGATCGACCACTATCTATATATCTGAACAAGACACAA---TCAAATAGTGGAACCTCTTCAGCAGTC
hu.4-C	1307	CTCTGATCGACCACTGTATTATCTGAACAAGACACAA---ACAAATAGTGGAACCTCTTCAGCAGTC
rh.54-D	1313	CCCTCATCGACCACTACCTGTATTACCTGGCTAGAACACAGAGTAAACCCAGGAGGCACATCTGGCAATCG
rh.48-D	1313	CTCTTATCGACCACTACCTGTATTACCTGGCCAGAACACAGAGCAACCGCAGGAGGCACAGCTGGCAATCG
rh.55-D	1313	CTCTTATCGACCACTACCTGTATTACCTGGCCAGAACACAGAGCAACCGCAGGAGGCACAGCTGGCAATCG
rh.62-D	1313	CTCTTATCGACCACTACCTGTATTACCTGGCCAGAACACAGAGCAACCGCAGGAGGCACAGCTGGCAATCG
AAV7-D	1313	CCCTCATCGACCACTACCTGTATTACCTGGCCAGAACACAGAGTAAACCCAGGAGGCACAGCTGGCAATCG
rh.52-E	1316	CTCTCATCGACCACTACCTGTACTACCTGTCAAGAACCCAGTCT---ACGGGAGGCACAGCGGGAAACCCA
rh.51-E	1316	CTCTCATCGACCACTACCTGTACTACCTGTCAAGAACCCAGTCT---ACGGGAGGCACAGCGGGAAACCCA
hu.39-E	1316	CTCTCATCGACCACTACCTGTACTACCTGTCAAGAACCCAGTCT---ACGGGAGGCACAGCGGGAAACCCA
rh.53-E	1316	CTCTCATCGACCACTACCTGTACTACCTGTCAAGAACCCAGTCT---ACGGGAGGCACAGCGGGAAACCCA
hu.37-E	1316	CTCTCATCGACCACTACCTGTACTACCTGTCAAGAACCCAGTCT---ACGGGAGGCACAGCGGGAAACCCA
rh.43-E	1313	CTCTGATTGACCACTACCTGTACTACTTGTCTCGGACTCAAAACA---ACAGGAGGCACGCGGAAATACGCA
rh.50-E	1316	CTCTCGTCGACCACTACCTGTACTACCTGTCAAGAACCCAGTCT---ACGGGAGGCACAGCGGGAAACCCA
rh.49-E	1316	CTCTCATCGACCACTACCTGTACTACCTGTCAAGAACCCAGTCT---ACGGGAGGCACAGCGGGAAACCCA
rh.61-E	1316	CTCTCATCGACCACTACCTGTACTACCTGTCAAGAACCCAGTCT---ACGGGAGGCACAGCGGGAAACCCA
hu.41-E	1316	CTCTCATCGACCACTACCTGTACTACTTATCCAGAACTCAGTCC---ACAGGAGGAACCTCAAGGTACCCA
rh.64-E	1316	CTCTCATCGACCACTACCTGTACTACTTATCCAGAACTCAGTCT---ACGGGAGGCACAGCGGGAAACCCA
hu.42-E	1316	CTCTCATCGACCACTACCTGTACTACTTATCCAGAACTCAGTCC---ACAGGAGGAACCTCAAGGTACCCA
rh.57-E	1316	CTCTCATCGACCACTACCTGTACTACTTGTCAAGAACCCAGTCT---ACGGGAGGCACAGCGGGAAACCCA
hu.40-E	1316	CTCTCATCGACCACTACCTGTACTACTTATCCAGAACTCAGTCC---ACAGGAGGAACCTCAAGGTACCCA
AAV8-E	1316	CTCTGATTGACCACTACCTGTACTACTTGTCTCGGACTCAAAACA---ACAGGAGGCACGCGGAAATACGCA
rh.58-E	1316	CTCTCATCGACCACTACCTGTACTACTTGTCAAGAACCCAGTCT---ACGGGAGGCACAGCGGGAAACCCA

FIG. 3BC

rh. 40-E	1316	CTCTCATCGACCACTGCTACTACTTATCCAGAACTCAGTCC--ACAGGAGGAACCTCAAGGTACCCA	1410	1420	1430	1440	1450	1460	1470
hu. 67-E	1316	CTCTCATCGACCACTGCTACTACTTATCCAGAACTCAGTCC--ACAGGAGGAACCTCAAGGTACCCA	..... ..... ..... ..... ..... ..... ..... ..... ..... .....						
hu. 17-E	1316	CCCTCATCGACCACTGCTACTACTGCTCGGACTCAGTCC--ACGGGAGGTACCGCAGGAACTCA							
hu. 6-E	1316	CCCTCATCGACCACTGCTACTACTGCTCGGACTCAGTCC--ACGGGAGGTACCGCAGGAACTCA							
hu. 66-E	1316	CTCTCATCGACCACTGCTACTACTTATCCAGAACTCAGTCC--ACAGGAGGAACCTCAAGGTACCCA							
rh. 38-E	1316	CTCTCATCGACCACTGCTACTACTTATCCAGAACTCAGTCC--ACAGGAGGAACCTCAAGGTACCCA							
hu. 32-F	1313	CACCTCATCGACCAATACTTGTACTATCTCTCAAAGACTATTAAACGGTTCTGGA-----CAGAATCAACA							
AAV9/hu	1313	CACCTCATCGACCAATACTTGTACTATCTCTCAAAGACTATTAAACGGTTCTGGA-----CAGAATCAACA							
hu. 31-F	1313	CACCTCATCGACCAATACTTGTACTATCTCTCAAAGACTATTAAACGGTTCTGGA-----CAGAATCAACA							
AAV5	1335	CGGAGTCCAGTTCAACAAGAACCTGGCCGGGAGATACGCCAACACCTACAAAACCTGGTCCCGGGGCC	..... ..... ..... ..... ..... ..... ..... ..... ..... .....						
AAV3-3	1377	ACGGCTGCTTTTAGCCAGGCTGGCCCTCAGTCTATGTCTTTGCAGGCCAGAAAATTGGCTACCTGGGCC							
AAV4-4	1359	CACCACCAACTTTACCAAGCTGCGGCTTACCAACTTTTCCAACCTTAAAGAACTGGCTGCCCGGGCCT							
AAV1-A	1377	GGACTTGCTGTTAGCCGTGGGTCTCCAGCTGGCATGTCTGTTTTCAGCCCCAAAACCTGGTACCTGGACCC							
hu. 46-A	1377	GGACTTGCTGTTAGCCGTGGGTCTCCAGCTGGCATGTCTGTTTTCAGCCCCAAAACCTGGTACCTGGACCC							
hu. 48-A	1377	GGACTTGCTGTTAGCCGTGGGTCTCCAGCTGGCATGTCTGTTTTCAGCCCCAAAACCTGGTACCTGGACCC							
hu. 44-A	1377	GGACTTGCTGTTAGCCGTGGGTCTCCAGCTGGCATGTCTGTTTTCAGCCCCAAAACCTGGTACCTGGACCC							
hu. 43-A	1380	GGACTTGCTGTTAGCCGTGGGTCTCCAGCTGGCATGTCTGTTTTCAGCCCCAAAACCTGGTACCTGGACCC							
AAV6-A	1377	GGACTTGCTGTTAGCCGTGGGTCTCCAGCTGGCATGTCTGTTTTCAGCCCCAAAACCTGGTACCTGGACCC							
hu. 34-B	1374	AAGGCTTCAGTTTTCAGGCCCGGAGCGAGTGACATTCGGGACCAAGTCTAGGAACTGGCTTCTCTGGACCC							
hu. 47-B	1374	AAGGCTTCAGTTTTCAGGCCCGGAGCGAGTGACATTCGGGACCAAGTCTAGGAACTGGCTTCTCTGGACCC							
hu. 29-B	1374	CAGGCTTCAGTTTTCAGGCCCGGAGCGAGTGACATTCGGGACCAAGTCTAGGAACTGGCTTCTCTGGACCC							
hu. 63-B	1374	AAGGCTTCAGTTTTCAGGCCCGGAGCGAGTGACATTCGGGACCAAGTCTAGGAACTGGCTTCTCTGGACCC							
hu. 56-B	1374	CAGGCTTCAGTTTTCAGGCCCGGAGCGAGTGACATTCGGGACCAAGTCTAGGAACTGGCTTCTCTGGACCC							
hu. 45-B	1374	AAGGCTTCAGTTTTCAGGCCCGGAGCGAGTGACATTCGGGACCAAGTCTAGGAACTGGCTTCTCTGGACCC							
hu. 57-B	1371	CAGGCTTCAGTTTTCAGGCCCGGAGCGAGTGACATTCGGGACCAAGTCTAGGAACTGGCTTCTCTGGACCC							
hu. 35-B	1374	AAGGCTTCAGTTTTCAGGCCCGGAGCGAGTGACATTCGGGACCAAGTCTAGGAACTGGCTTCTCTGGACCC							
hu. 58-B	1374	CAGGCTTCAGTTTTCAGGCCCGGAGCGAGTGACATTCGGGATCAGTCTAGGAACTGGCTTCTCTGGACCC							

FIG. 3BD

hu. 28-B	1374	CAGGCTTCAGTTTCTCAGGCCGGAGCGAGTGACATTCAGGACCAGTCTAGGAACTGGCTTCCTGGACCC
hu. 51-B	1374	AAGGCTTCAGTTTCTCAGGCCGGAGCGAGTGACATTCGGGACCAGTCTAGGAACTGGCTTCCTGGACCC
hu. 19-B	1374	CAGGCTTCAGTTTCTCAGGCCGGAGCGAGTGACATTCGGGACCAGTCTAGGAACTGGCTTCCTGGACCC
hu. 49-B	1374	CAGGCTTCAGTTTCTCAGGCCGGAGCGAGTGACATTCGGGACCAGTCTAGGAACTGGCTTCCTGGACCC
hu. 52-B	1374	AAGGCTTCAGTTTCTCAGGCCGGAGCGAGTGACATTCGGGACCAGTCTAGGAACTGGCTTCCTGGACCC
hu. 13-B	1374	CAGGCTTCAGTTTCTCAGGCCGGAGCGAGTGACATTCGGGACCAGTCTAGGAACTGGCTTCCTGGACCC
AAV2-B	1374	AAGGCTTCAGTTTCTCAGGCCGGAGCGAGTGACATTCGGGACCAGTCTAGGAACTGGCTTCCTGGACCC
hu. 20-B	1374	CAGGCTTCAGTTTCTCAGGCCGGAGCGAGTGACATTCGGGACCAGTCTAGGAACTGGCTTCCTGGACCC
hu. 24-B	1374	CAGGCTTCAGTTTCTCAGGCCGGAGCGAGTGACATTCGGGACCAGTCTAGGAACTGGCTTCCTGGACCC
hu. 64-B	1374	AAGGCTTCAGTTTCTCAGGCCGGAGCGAGTGACATTCGGGACCAGTCTAGGAACTGGCTTCCTGGACCC
hu. 27-B	1374	CAGGCTTCAGTTTCTCAGGCCGGAGCGAGTGACATTCGGGACCAGTCTAGGAACTGGCTTCCTGGACCC
hu. 21-B	1374	CAGGCTTCAGTTTCTCAGGCCGGAGCGAGTGACATTCGGGACCAGTCTAGGAACTGGCTTCCTGGACCC
hu. 22-B	1374	CAGGCTTCAGTTTCTCAGGCCGGAGCGAGTGACATTCGGGACCAGTCTAGGAACTGGCTTCCTGGACCC
hu. 23-B	1374	CAGGCTTCAGTTTCTCAGGCCGGAGCGAGTGACATTCGGGACCAGTCTAGGAACTGGCTTCCTGGACCC
hu. 7-C	1374	TCGGCTACTGTTAGTCAAGCTGGACCCCAACCAACATGTCTCTTCAAGCTAAACCTGGCTGCCTGGACCT
hu. 61-C	1374	TCGGCTACTGTTAGTCAAGCTGGACCCCAACCAACATGTCTCTTCAAGCTAAACCTGGCTGCCTGGACCT
rh. 56-C	1374	TAGGCTACTGTTAGTCAAGCTGGACCCCAACCAACATGTCTCTTCAAGCTAAACCTGGCTGCCTGGACCC
hu. 9-C	1374	TAGGCTACTGTTAGTCAAGCTGGACCCCAACCAACATGTCTCTTCAAGCTAAACCTGGCTGCCTGGACCC
hu. 54-C	1371	TCGGCTACTGTTAGTCAAGCTGGACCCCAACCAACATGTCTCTTCAAGCTAAACCTGGCTGCCTGGACCC
hu. 53-C	1371	TCGGCTACTGTTAGTCAAGCTGGACCCCAACCAACATGTCTCTTCAAGCTAAACCTGGCTGCCTGGACCC
hu. 60-C	1374	TCGGCTACTGTTAGTCAAGCTGGACCCCAACCAACATGTCTCTTCAAGCTAAACCTGGCTGCCTGGACCC
hu. 55-C	1371	TCGGCTACTGTTAGTCAAGCTGGACCCCAACCAACATGTCTCTTCAAGCTAAACCTGGCTGCCTGGACCC
hu. 2-C	1374	TCGGCTACTGTTAGTCAAGCTGGACCCCAACCAACATGTCTCTTCAAGCTAAACCTGGCTGCCTGGACCC
hu. 1-C	1374	TCGGCTACTGTTAGTCAAGCTGGACCCCAACCAACATGTCTCTTCAAGCTAAACCTGGCTGCCTGGACCC
hu. 18-C	1374	TCGGCTACTGTTAGTCAAGCTGGACCCCAACCAACATGTCTCTTCAAGCTAAACCTGGCTGCCTGGACCC
hu. 3-C	1377	TCGGCTACTGTTAGTCAAGCTGGACCCCAACCAACATGTCTCTTCAAGCTAAACCTGGCTGCCTGGACCC
hu. 25-C	1374	TCGGCTACTGTTAGTCAAGCTGGACCCCAACCAACATGTCTCTTCAAGCTAAACCTGGCTGCCTGGACCC
hu. 15-C	1374	TCGGCTACTGTTAGTCAAGCTGGACCCCAACCAACATGTCTCTTCAAGCTAAACCTGGCTGCCTGGACCC
hu. 16-C	1374	TCGGCTACTGTTAGTCAAGCTGGACCCCAACCAACATGTCTCTTCAAGCTAAACCTGGCTGCCTGGACCC
hu. 11-C	1374	TAGGCTACTGTTAGTCAAGCTGGACCCCAACCAACATGTCTCTTCAAGCTAAACCTGGCTGCCTGGACCC

FIG. 3BE



hu.10-C 1374 TAGGCTACTGTTTAGCCAAAGCTGGACCCACCAGCATGTCTCTTCAAGCTAAAAAAGTGGCTGCCCTGGACCT  
 hu.4-C 1374 TCGGCTACTGTTTAGCCAAAGCTGGACCAACCAACATGTCTCTTCAAGCTAAAAAAGTGGCTGCCCTGGACCT  
 rh.54-D 1383 GGAAGTGCAGTTTTTACCAGGGGGGCTTCCACCATGGCCGACCAAGCCAAAGAACTGGTTACCTGGACCT  
 rh.48-D 1383 GGAAGTGCAGTTTTTACCAGGGGGGCTTCCACCATGGCCGACCAAGCCAAAGAACTGGTTACCTGGACCT  
 rh.55-D 1383 GGAAGTGCAGTTTTTACCAGGGGGGCTTCCACCATGGCCGACCAAGCCAAAGAACTGGTTACCTGGACCT  
 rh.62-D 1383 GGAAGTGCAGTTTTTACCAGGGGGGCTTCCACCATGGCCGACCAAGCCAAAGAACTGGTTACCTGGACCT  
 AAV7-D 1383 GGAAGTGCAGTTTTTACCAGGGGGGCTTCCACCATGGCCGACCAAGCCAAAGAACTGGTTACCTGGACCT  
 rh.52-E 1383 GCAGTTGCTGTCTTCTCAGGGCCGGGCTAGCAACATGTGGCTCAGGCCAGAAACTGGCTGCCCTGGACCC  
 rh.51-E 1383 GCAGTTGCTGTCTTCTCAGGGCCGGGCTAGCAACATGTGGCTCAGGCCAGAAACTGGCTGCCCTGGACCC  
 hu.39-E 1383 GCAGTTGCTGTCTTCTCAGGGCCGGGCTAGCAACATGTGGCTCAGGCCAGAAACTGGCTGCCCTGGACCC  
 rh.53-E 1383 GCAGTTGCTGTCTTCTCAGGGCCGGGCTAGCAACATGTGGCTCAGGCCAGAAACTGGCTGCCCTGGACCC  
 hu.37-E 1383 GCAATTGTTATTTTCTCAAGCTGGGCTGCAAAACATGTGGCTCAGGCTAAGAACTGGCTACCTGGACCT  
 rh.43-E 1380 GACTCTGGGCTTCAGCCAAAGTGGGCTAATACAATGGCCAATCAGGCCAAGAACTGGCTGCCCTGGACCC  
 rh.50-E 1383 GCAGTTGCTGTCTTCTCAGGGCCGGGCTAGCAACATGTGGCTCAGGCCAGAAACTGGCTGCCCTGGACCC  
 rh.49-E 1383 GCAGTTGCTGTCTTCTCAGGGCCGGGCTAGCAACATGTGGCTCAGGCCAGAAACTGGCTGCCCTGGACCC  
 rh.61-E 1383 GCAGTTGCTGTCTTCTCAGGGCCGGGCTAGCAACATGTGGCTCAGGCCAGAAACTGGCTGCCCTGGACCC  
 hu.41-E 1383 GCAATTGTTATTTTCTCAAGCTGGGCTGCAAAACATGTGGCTCAGGCTAAGAACTGGCTACCTGGACCT  
 rh.64-E 1383 GCAGTTGCTGTCTTCTCAGGGCCGGGCTAGCAACATGTGGCTCAGGCCAGAAACTGGCTGCCCTGGACCC  
 hu.42-E 1383 GCAATTGTTATTTTCTCAAGCTGGGCTGCAAAACATGTGGCTCAGGCTAAGAACTGGCTACCTGGACCT  
 rh.57-E 1383 GCAGTTGCTGTCTTCTCAGGGCCGGGCTAGCAACATGTGGCTCAGGCCAGAAACTGGCTGCCCTGGACCC  
 hu.40-E 1383 GCAATTGTTATTTTCTCAAGCTGGGCTGCAAAACATGTGGCTCAGGCTAAGAACTGGCTACCTGGACCT  
 AAV8-E 1383 GACTCTGGGCTTCAGCCAAAGTGGGCTAATACAATGGCCAATCAGGCCAAGAACTGGCTGCCAGGACCC  
 rh.58-E 1383 GCAGTTGCTGTCTTCTCAGGGCCGGGCTAGCAACATGTGGCTCAGGCCAGAAACTGGCTGCCCTGGACCC  
 rh.40-E 1383 GCAATTGTTATTTTCTCAAGCTGGGCTGCAAAACATGTGGCTCAGGCTAAGAACTGGCTACCTGGACCT  
 hu.67-E 1383 GCAATTGTTATTTTCTCAAGCTGGGCTGCAAAACATGTGGCTCAGGCTAAGAACTGGCTACCTGGACCT  
 hu.17-E 1383 GCAGTTGCTATTTTCTCAGGGCCGGGCTAATAACATGTGGCTCAGGCCAGAAACTGGCTACCCGGGCCC  
 hu.6-E 1383 GCAGTTGCTATTTTCTCAGGGCCGGGCTAATAACATGTGGCTCAGGCCAGAAACTGGCTACCCGGGCCC  
 hu.66-E 1383 GCAATTGTTATTTTCTCAAGCTGGGCTGCAAAACATGTGGCTCAGGCTAAGAACTGGCTACCTGGACCT  
 rh.38-E 1383 GCAATTGTTATTTTCTCAAGCTGGGCTGCAAAACATGTGGCTCAGGCTAAGAACTGGCTACCTGGACCT  
 hu.32-E 1377 AACGCTAAATTCAGCGTGGCGGACCCAGCAACATGGCTGTCCAGGGAAGAACTACATACCTGGACCC

FIG. 3Bf

AAV9/hu	1377	AACGCTAAAAATTCAGTGTGGCCCGGACCCAGCAACATGGCTGTCCAGGGAAGAACTACATACCTGGACCC	1480	1490	1500	1510	1520	1530	1540
hu.31-F	1377	AACGCTAAAAATTCAGTGTGGCCCGGACCCAGCAACATGGCTGTCCAGGGAAGAACTACATACCTGGACCC	..... ..... ..... ..... ..... ..... ..... ..... ..... .....						
AAV5	1405	ATGGGCCGAACCCAGGGCTGGAACCTGGGCTCCGGGTCAAC	..... ..... ..... ..... ..... ..... ..... ..... ..... .....						
AAV3-3	1447	TGCTACCGGCAACAGAGACTTTCAAAGACTGCTAACGACAAC	..... ..... ..... ..... ..... ..... ..... ..... ..... .....						
AAV4-4	1429	TCAATCAAGCAGCAGGGCTTCTCAAAGACTGCCAATCAAAACTACAAGATCCTGCCACCGGTCAGACA	..... ..... ..... ..... ..... ..... ..... ..... ..... .....						
AAV1-A	1447	TGTTATCGGCAGCAGCGGCTTCTAAACCAAAACAGACAAC	..... ..... ..... ..... ..... ..... ..... ..... ..... .....						
hu.46-A	1447	TGTTATCGGCAGCAGCGGCTTCTAAACCAAAACAGACAAC	..... ..... ..... ..... ..... ..... ..... ..... ..... .....						
hu.48-A	1447	TGTTATCGGCAGCAGCGGCTTCTAAACCAAAACAGACAAC	..... ..... ..... ..... ..... ..... ..... ..... ..... .....						
hu.44-A	1447	TGTTATCGGCAGCAGCGGCTTCTAAACCAAAACAGACAAC	..... ..... ..... ..... ..... ..... ..... ..... ..... .....						
hu.43-A	1450	TGTTATCGGCAGCAGCGGCTTCTAAACCAAAACAGACAAC	..... ..... ..... ..... ..... ..... ..... ..... ..... .....						
AAV6-A	1447	TGTTACCGGCCAGCAGCGAGTATCAAAGACATCTGCGGATAAC	..... ..... ..... ..... ..... ..... ..... ..... ..... .....						
hu.34-B	1444	TGTTACCGGCCAGCAGCGAGTATCAAAGACATCTGCGGATAAC	..... ..... ..... ..... ..... ..... ..... ..... ..... .....						
hu.47-B	1444	TGTTACCGGCCAGCAGCGAGTATCAAAGACATCTGCGGATAAC	..... ..... ..... ..... ..... ..... ..... ..... ..... .....						
hu.29-B	1444	TGTTACCGGCCAGCAGCGAGTATCAAAGACATCTGCGGATAAC	..... ..... ..... ..... ..... ..... ..... ..... ..... .....						
hu.63-B	1444	TGTTACCGGCCAGCAGCGAGTATCAAAGACATCTGCGGATAAC	..... ..... ..... ..... ..... ..... ..... ..... ..... .....						
hu.56-B	1444	TGTTACCGGCCAGCAGCGAGTATCAAAGACATCTGCGGATAAC	..... ..... ..... ..... ..... ..... ..... ..... ..... .....						
hu.45-B	1444	TGTTACCGGCCAGCAGCGAGTATCAAAGACATCTGCGGATAAC	..... ..... ..... ..... ..... ..... ..... ..... ..... .....						
hu.57-B	1444	TGTTACCGGCCAGCAGCGAGTATCAAAGACATCTGCGGATAAC	..... ..... ..... ..... ..... ..... ..... ..... ..... .....						
hu.35-B	1444	TGTTACCGGCCAGCAGCGAGTATCAAAGACATCTGCGGATAAC	..... ..... ..... ..... ..... ..... ..... ..... ..... .....						
hu.58-B	1444	TGTTACCGGCCAGCAGCGAGTATCAAAGACATCTGCGGATAAC	..... ..... ..... ..... ..... ..... ..... ..... ..... .....						
hu.28-B	1444	TGTTACCGGCCAGCAGCGAGTATCAAAGACATCTGCGGATAAC	..... ..... ..... ..... ..... ..... ..... ..... ..... .....						
hu.51-B	1444	TGTTACCGGCCAGCAGCGAGTATCAAAGACATCTGCGGATAAC	..... ..... ..... ..... ..... ..... ..... ..... ..... .....						
hu.19-B	1444	TGTTACCGGCCAGCAGCGAGTATCAAAGACATCTGCGGATAAC	..... ..... ..... ..... ..... ..... ..... ..... ..... .....						
hu.49-B	1444	TGTTACCGGCCAGCAGCGAGTATCAAAGACATCTGCGGATAAC	..... ..... ..... ..... ..... ..... ..... ..... ..... .....						
hu.52-B	1444	TGTTACCGGCCAGCAGCGAGTATCAAAGACATCTGCGGATAAC	..... ..... ..... ..... ..... ..... ..... ..... ..... .....						
hu.13-B	1444	TGTTACCGGCCAGCAGCGAGTATCAAAGACATCTGCGGATAAC	..... ..... ..... ..... ..... ..... ..... ..... ..... .....						
AAV2-B	1444	TGTTACCGGCCAGCAGCGAGTATCAAAGACATCTGCGGATAAC	..... ..... ..... ..... ..... ..... ..... ..... ..... .....						

FIG. 3BG

hu. 20-B	1444	TGTTACCGCCAGCAGCGAGTATCAAAGACAGCTGCGGACAAAC	-----AACAAACAGTGATT
hu. 24-B	1444	TGTTACCGCCAGCAGCGAGTATCAAAGACAGCTGCGGACAAAC	-----AACAAACAGTGATT
hu. 64-B	1444	TGTTACCGCCAGCAGCGAGTATCAAAGACATCTGCGGATAAC	-----AACAAACAGTGAAT
hu. 27-B	1444	TGTTACCGCCAGCAGCGAGTATCAAAGACAGCTGCGGACAAAC	-----AACAAACAGTGATT
hu. 21-B	1444	TGTTACCGCCAGCAGCGAGTATCAAAGACAGCTGCGGACAAAC	-----AACAAACAGTGATT
hu. 22-B	1444	TGTTACCGCCAGCAGCGAGTATCAAAGACAGCTGCGGACAAAC	-----AACAAACAGTGATT
hu. 23-B	1444	TGTTACCGCCAGCAGCGAGTATCAAAGACAGCTGCGGACAAAC	-----AACAAACAGTAACT
hu. 7-C	1444	TGCTACAGACAGCAGCGTCTGTCAAAGCAGGCAACGACAAC	-----AACAAACAGCAACT
hu. 61-C	1444	TGCTACAGACAGCAGCGTCTGTCAAAGCAGGCAACGACAAC	-----AACAAACAGCAACT
rh. 56-C	1444	TGCTACAGACAGCAGCGTCTGTCAAAGCAGGCAACGACAAC	-----AACAAACAGCAACT
hu. 9-C	1444	TGCTACAGACAGCAGCGTCTGTCAAAGCAGGCAACGACAAC	-----AACAAACAGCAACT
hu. 54-C	1441	TGTTATCGCCAGCAGCGTTTGTCAAAGCAGGCAACGACAAC	-----AACAAACAGCAACT
hu. 53-C	1441	TGTTATCGCCAGCAGCGTTTGTCAAAGCAGGCAACGACAAC	-----AACAAACAGCAACT
hu. 60-C	1444	TGCTACAGACAGCAGCGTCTGTCAAAGCAGGCAACGACAAC	-----AACAAACAGCAACT
hu. 55-C	1441	TGTTATCGCCAGCAGCGTTTGTCAAAGCAGGCAACGACAAC	-----AACAAACAGCAACT
hu. 2-C	1444	TGCTACAGACAGCAGCGTCTGTCAAAGCAGGCAACGACAAC	-----AACAAACAGCAACT
hu. 1-C	1444	TGCTACAGACAGCAGCGTCTGTCAAAGCAGGCAACGACAAC	-----AACAAACAGCAACT
hu. 18-C	1444	TGCTACAGACAGCAGCGTCTGTCAAAGCAGGCAACGACAAC	-----AACAACTGCAACT
hu. 3-C	1447	TGCTACAGACAGCAGCGTCTGTCAAAGCAGGCAACGACAAC	-----AACAAACAGCAACT
hu. 25-C	1444	TGCTACAGACAGCAGCGTCTGTCAAAGCAGGCAACGACAAC	-----AACAAACAGCAACT
hu. 15-C	1444	TGCTACAGACAGCAGCGTCTGTCAAAGCAGGCAACGACAAC	-----AACAAACAGCAACT
hu. 16-C	1444	TGCTACAGACAGCAGCGTCTGTCAAAGCAGGCAACGACAAC	-----AACAAACAGCAACT
hu. 11-C	1444	TGCTACAGACAGCAGCGTCTGTCAAAGCAGGCAACGACAAC	-----AACAAACAGCAACT
hu. 10-C	1444	TGCTACAGACAGCAGCGTCTGTCAAAGCAGGCAACGACAAC	-----AACAAACAGCAACT
hu. 4-C	1444	TGCTACAGACAGCAGCGTCTGTCAAAGCAGGCAACGACAAC	-----AACAAACAGCAACT
rh. 54-D	1453	TGCTTCCGGCAACAAAGAGTTTCCAAAACACTGGATCAAAAC	-----AACAAACAGCAACT
rh. 48-D	1453	TGCTTCCGGCAACAAAGAGTCTCCAAAGACGCTGGATCAAAAC	-----AACAAACAGCAACT
rh. 55-D	1453	TGCTTCCGGCAACAAAGAGTCTCCAAAGACGCTGGATCAAAAC	-----AACAAACAGCAACT
rh. 62-D	1453	TGCTTCCGGCAACAAAGAGTCTCCAAAGACGCTGGATCAAAAC	-----AACAAACAGCAACT
AAV7-D	1453	TGCTTCCGGCAACAAAGAGTCTCCAAAGACGCTGGATCAAAAC	-----AACAAACAGCAACT

FIG. 3BH

93/125

rh.52-E	1453	TGCTACAGACAGCGCGTCTCCACGACACTGTGCAAAAC	1550	1560	1570	1580	1590	1600	1610
rh.51-E	1453	TGCTACAGACAGCGCGTCTCCACGACACTGTGCAAAAC	..... ..... ..... ..... ..... ..... ..... ..... ..... .....						
hu.39-E	1453	TGCTACAGACAGCGCGTCTCCACGACACTGTGCAAAAC	1460	GGCCTTCGCCACGACCAATAGGATGGAGCTCGAGGGCGCGAGTTAC					
rh.53-E	1453	TGCTACAGACAGCGCGTCTCCACGACACTGTGCAAAAC	1502	TTCCTTGGACAGCGGCCAGCAAATATCATCTCAATGGCCGCGACTCGCTGGTGAATCCAGGACCAGCTAT					
hu.37-E	1453	TGCTACCGGACAGCGAGTCTCTACGACACTGTGCAAAAC							
rh.43-E	1450	TGTTACCGCCAACAACGCGTCTCAACGACAACCGGGCAAAAC							
rh.50-E	1453	TGCTACAGACAGCGCGTCTCCACGACACTGTGCAAAAC							
rh.49-E	1453	TGCTACAGACAGCGCGTCTCCACGACACTGTGCAAAAC							
rh.61-E	1453	TGCTACAGACAGCGCGTCTCCACGACACTGTGCAAAAC							
hu.41-E	1453	TGCTACCGGACAGCGAGTCTCTACGACACTGTGCAAAAC							
rh.64-E	1453	TGCTACAGACAGCGCGTCTCCACGACACTGTGCAAAAC							
hu.42-E	1453	TGCTACCGGACAGCGAGTCTCTACGACACTGTGCAAAAC							
rh.57-E	1453	TGCTACAGACAGCGCGTCTCCACGACACTGTGCAAAAC							
hu.40-E	1453	TGCTACCGGACAGCGAGTCTCTACGACACTGTGCAAAAC							
AAV8-E	1453	TGTTACCGCCAACAACGCGTCTCAACGACAACCGGGCAAAAC							
rh.58-E	1453	TGCTACAGACAGCGCGTCTCCACGACACTGTGCAAAAC							
rh.40-E	1453	TGCTACCGGACAGCGAGTCTCTACGACACTGTGCAAAAC							
hu.67-E	1453	TGCTACCGGACAGCGAGTCTCTACGACACTGTGCAAAAC							
hu.17-E	1453	TGCTACCGGACAGCAACGCGTCTCCACGACACTGTGCAAAAC							
hu.6-E	1453	TGCTACCGGACAGCAACGCGTCTCCACGACACTGTGCAAAAC							
hu.66-E	1453	TGCTACCGGACAGCGAGTCTCTACGACACTGTGCAAAAC							
rh.38-E	1453	TGCTACCGGACAGCGAGTCTCTACGACACTGTGCAAAAC							
hu.32-F	1447	AGTACCGGACAAACAGTGTCTCAACCACTGTGACTCAAAAC							
AAV9/hu	1447	AGTACCGGACAAACAGTGTCTCAACCACTGTGACTCAAAAC							
hu.31-F	1447	AGTACCGGACAAACAGTGTCTCAACCACTGTGACTCAAAAC							

FIG. 3BI

AAV4-4 - 1499 GTCTCATCAAAATACGAGACGCACAGCACTCTGGACGGAAGATGGAGTGCCCTGACCCCCGGACCTCCAAT  
 AAV1-A - 1502 TTACCTGGACTGGTGTCTCAAAATATAAACCCTCAATGGGCGTGAATCCATCATCAACCCCTGGCACTGCTAT  
 hu.46-A 1502 TTACCTGGACTGGTGTCTCAAAATATAAACCCTCAATGGGCGTGAATCCATCATCAACCCCTGGCACTGCTAT  
 hu.48-A 1502 TTACCTGGACTGGTGTCTCAAAATATAAACCCTCAATGGGCGTGAATCCATCATCAACCCCTGGCACTGCTAT  
 hu.44-A 1502 TTACCTGGACTGGTGTCTCAAAATATAAACCCTCAATGGGCGTGAATCCATCATCAACCCCTGGCACTGCTAT  
 hu.43-A 1505 TTACCTGGACTGGTGTCTCAAAATATAAACCCTCAATGGGCGTGAATCTATAATCAACCCCTGGCACTGCTAT  
 AAV6-A 1502 TTACCTGGACTGGTGTCTCAAAATATAAACCCTCAATGGGCGTGAATGGGCGGCGGCCAT  
 hu.34-B 1499 ACTCGTGACTGGAGCTACCAAGTACCACCTCAATGGCAGAGACTCTCTGGTGAATCCGGGCGCGGCCAT  
 hu.47-B 1499 ACTCGTGACTGGAGCTACCAAGTACCACCTCAATGGCAGAGACTCTCTGGTGAATCCGGGCGCGGCCAT  
 hu.29-B 1499 ACTCGTGACTGGAGCTACCAAGTACCACCTCAATGGCAGAGACTCTCTGGTGAATCCGGGCGCGGCCAT  
 hu.63-B 1499 ACTCGTGACTGGAGCTACCAAGTACCACCTCAATGGCAGAGACTCTCTGGTGAATCCGGGCGCGGCCAT  
 hu.56-B 1499 ACTCGTGACTGGAGCTACCAAGTACCACCTCAATGGCAGAGACTCTCTGGTGAATCCGGGCGCGGCCAT  
 hu.45-B 1499 ACTCGTGACTGGAGCTACCAAGTACCACCTCAATGGCAGAGACTCTCTGGTGAATCCGGGCGCGGCCAT  
 hu.57-B 1496 ACTCGTGACTGGAGCTACCAAGTACCACCTCAATGGCAGAGACTCTCTGGTGAATCCGGGCGCGGCCAT  
 hu.35-B 1499 ACTCGTGACTGGAGCTACCAAGTACCACCTCAATGGCAGAGACTCTCTGGTGAATCCGGGCGCGGCCAT  
 hu.58-B 1499 ACTCGTGACTGGAGCTACCAAGTACCACCTCAATGGCAGAGACTCTCTGGTGAATCCGGGCGCGGCCAT  
 hu.28-B 1499 ACTCGTGACTGGAGCTACCAAGTACCACCTCAATGGCAGAGACTCTCTGGTGAATCCGGGCGCGGCCAT  
 hu.51-B 1499 ACTCGTGACTGGAGCTACCAAGTACCACCTCAATGGCAGAGACTCTCTGGTGAATCCGGGCGCGGCCAT  
 hu.19-B 1499 ACTCGTGACTGGAGCTACCAAGTACCACCTCAATGGCAGAGACTCTCTGGTGAATCCGGGCGCGGCCAT  
 hu.49-B 1499 ACTCGTGACTGGAGCTACCAAGTACCACCTCAATGGCAGAGACTCTCTGGTGAATCCGGGCGCGGCCAT  
 hu.52-B 1499 ACTCGTGACTGGAGCTACCAAGTACCACCTCAATGGCAGAGACTCTCTGGTGAATCCGGGCGCGGCCAT  
 hu.13-B 1499 ACTCGTGACTGGAGCTACCAAGTACCACCTCAATGGCAGAGACTCTCTGGTGAATCCGGGCGCGGCCAT  
 AAV2-B 1499 ACTCGTGACTGGAGCTACCAAGTACCACCTCAATGGCAGAGACTCTCTGGTGAATCCGGGCGCGGCCAT  
 hu.20-B 1499 ACTCGTGACTGGAGCTACCAAGTACCACCTCAATGGCAGAGACTCTCTGGTGAATCCGGGCGCGGCCAT  
 hu.24-B 1499 ACTCGTGACTGGAGCTACCAAGTACCACCTCAATGGCAGAGACTCTCTGGTGAATCCGGGCGCGGCCAT  
 hu.64-B 1499 ACTCGTGACTGGAGCTACCAAGTACCACCTCAATGGCAGAGACTCTCTGGTGAATCCGGGCGCGGCCAT  
 hu.27-B 1499 ACTCGTGACTGGAGCTACCAAGTACCACCTCAATGGCAGAGACTCTCTGGTGAATCCGGGCGCGGCCAT  
 hu.21-B 1499 ACTCGTGACTGGAGCTACCAAGTACCACCTCAATGGCAGAGACTCTCTGGTGAATCCGGGCGCGGCCAT  
 hu.22-B 1499 ACTCGTGACTGGAGCTACCAAGTACCACCTCAATGGCAGAGACTCTCTGGTGAATCCGGGCGCGGCCAT  
 hu.23-B 1499 ACTCGTGACTGGAGCTACCAAGTACCACCTCAATGGCAGAGACTCTCTGGTGAATCCGGGCGCGGCCAT

FIG. 3BJ

hu. 7-C	1499	TTCCCTGGACTGCGGGCTACAAAGTATCACCTAAATGGCCGGGACTCGTTGGTTAATCCAGGACCAGCTAT
hu. 61-C	1499	TTCCCTGGAGCCGAGCTACAAAGTATCATCTAAATGGCCGGGACTCGTTGGTTAATCCAGGACCAGCTAT
rh. 56-C	1499	TTCCCTGGACTGCGGGCTACAAAGTACCACTAAATGGCCGGGACTCGTTGGTTAATCCAGGACCAGCTAT
hu. 9-C	1499	TTCCCTGGACTGCGGGCTACAAAGTATCATCTAAATGGCCGGGACTCGTTGGTTAATCCAGGACCAGCTAT
hu. 54-C	1496	TTCCCTGGACTGGAGCTACCAAGTACCACTCAATGGCGGAGACTCTTTGGTGAACCCGGGCCCGGCCAT
hu. 53-C	1496	TTCCCTGGACTGGAGCTACCAAGTACTACCTCAATGGCAGAGACTCTTTGGTGAACCCGGGCCCGGCCAT
hu. 60-C	1499	TTCCCTGGACTGCAGCTACAAAGTATCATCTAAATGGCCGGGACTCGTTGGTTAATCCAGGACCAGCTAT
hu. 55-C	1496	TTCCCTGGACTGGAGCTACCAAGTACCACTCAATGGCAGAGACTCTTTGGTGAACCCGGGCCCGGCCAT
hu. 2-C	1499	TTCCCTGGACTGCAGCTACAAAGTATCATCTAAATGGCCGGGACTCGTTGGTTAATCCAGGACCAGCTAT
hu. 1-C	1499	TTCCCTGGACTGCAGCTACAAAGTATCATCTAAATGGCCGGGACTCGTTGGTTAATCCAGGACCAGCTAT
hu. 18-C	1499	TTCCCTGGACTGCGGCTACAAAGTATCATCTAAATGGCCGGGACTCGTTGGTTAATCCAGGACCAGCTAT
hu. 3-C	1502	TTCCCTGGACTGCAGCTACAAAGTATCATCTAAATGGCCGGGACTCGTTGGTTAATCCAGGACCAGCTAT
hu. 25-C	1499	TTCCCTGGACTGCAGCTACAAAGTATCATCTAAATGGCCGGGACTCGTTGGTTAATCCAGGACCAGCTAT
hu. 15-C	1499	TTCCCTGGACTGCGGCTACAAAGTATCATCTAAATGGCCGGGACTCGTTGGTTAATCCAGGACCAGCTAT
hu. 16-C	1499	TTCCCTGGACTGCGGCTACAAAGTATCATCTAAATGGCCGGGACTCGTTGGTTAATCCAGGACCAGCTAT
hu. 11-C	1499	TTCCCTGGACTGCGGCTACAAAGTATCGTCTAAATGGCCGGGACTCGTTGGTTAATCCAGGACCAGCTAT
hu. 10-C	1499	TTCCCTGGACTGCGGCTACAAAGTATCATCTAAATGGCCGGGACTCGTTGGTTAATCCAGGACCAGCTAT
hu. 4-C	1499	TTCCCTGGACTGCAGCTACAAAGTATCATCTAAATGGCCGGGACTCGTTGGTTAATCCAGGACCAGCTAT
rh. 54-D	1508	TTGCTTGGACTGGTGCCACCAATAATCACCTGAACGGCAGAAACTCATTTGGTGAATCCTGGTGCGCCAT
rh. 48-D	1508	TTGCTTGGACTGGTGCCACCAATAACCATCTAAATGGAAGAAATTCTATTTGGTTAATCCCCTGGTGCGCCAT
rh. 55-D	1508	TTGCTTGGACTGGTGCCACCAATAACCATCTAAATGGAAGAAATTCTATTTGGTTAATCCCCTGGTGCGCCAT
rh. 62-D	1508	TTGCTTGGACTGGTGCCACCAATAACCATCTAAATGGAAGAAATTCTATTTGGTTAATCCCCTGGTGCGCCAT
AAV7-D	1508	TTGCTTGGACTGGTGCCACCAATAATCACCTGAACGGCAGAAACTCGTTGGTTAATCCCCTGGTGCGCCAT
rh. 52-E	1508	TTGCTTGGACTGGTGCCACCAAGTATCATCTGAACGGCAGAGACTCTCTGGTGAATCCGGGCGTGCGCCAT
rh. 51-E	1508	TTGCTTGGACTGGTGCCACCAAGTATCATCTGAACGGCAGAGACTCTCTGGTGAATCCGGGCGTGCGCCAT
hu. 39-E	1508	TTGCTTGGACTGGTGCCACCAAGTATCATCTGAACGGCAGAGACTCTCTGGTGAATCCGGGCGTGCGCCAT
rh. 53-E	1508	TTGCTTGGACTGGTGCCACCAAGTATCATCTGAACGGCAGAGACTCTCTGGTGAATCCGGGCGTGCGCCAT
hu. 37-E	1508	TTGCTTGGACTGGTGCCACCAATAATCACCTGAACGGAAGAGACTCTTTGGTAAATCCCCTGGTGCGCCAT
rh. 43-E	1505	TTGCTTGGACTGGTGCCACCAATAACCATCTGAATGGAAGAAATTCTATTTGGTTAATCCTGGCATCGCTAT
rh. 50-E	1508	TTGCTTGGACTGGTGCCACCAAGTATCATCTGAACGGCAGAGACTCTCTGGTGAATCCGGGCGTGCGCCAT

FIG. 3BK

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rh. 49-E	1508	TTGCTTGACTGGTGCACCAAGTATCATCTGAACGGCAGAGACTCTCTGGTGAATCCGGGCGTCGCCAT	1620	1630	1640	1650	1660	1670	1680
rh. 61-E	1508	TTGCTTGACTGGTGCACCAAGTATCATCTGAACGGCAGAGACTCTCTGGTGAATCCGGGCGTCGCCAT	..... ..... ..... ..... ..... ..... ..... ..... ..... .....						
hu. 41-E	1508	TTGCTTGACTGGTGCACCAAAATATCACCCTGAACGGAAGAGACTCTTTGGTAAATCCCGGTGTGCCAT	1530						
rh. 64-E	1508	TTGCTTGACTGGTGCACCAAGTATCATCTGAACGGCAGAGACTCTCTGGTGAATCCGGGCGTCGCCAT	1572						
hu. 42-E	1508	TTGCTTGACTGGTGCACCAAAATATCACCCTGAACGGAAGAGACTCTTTGGTAAATCCCGGTGTGCCAT	1569						
rh. 57-E	1508	TTGCTTGACTGGTGCACCAAGTATCATCTGAACGGCAGAGACTCTCTGGTGAATCCGGGCGTCGCCAT	1572						
hu. 40-E	1508	TTGCTTGACTGGTGCACCAAAATATCACCCTGAACGGAAGAGACTCTTTGGTAAATCCCGGTGTGCCAT	1572						
AAV8-E	1508	TTGCTTGACTGGTGCACCAAAATATCACCCTGAATGGAAGAAATTCATTGGCTAATCCTGGCATCGCTAT	1572						
rh. 58-E	1508	TTGCTTGACTGGTGCACCAAGTATCATCTGAACGGCAGAGACTCTCTGGTGAATCCGGGCGTCGCCAT	1572						
rh. 40-E	1508	TTGCTTGACTGGTGCACCAAAATATCACCCTGAACGGAAGAGACTCTTTGGTAAATCCCGGTGTGCCAT	1572						
hu. 67-E	1508	TTGCTTGACTGGTGCACCAAAATATCACCCTGAACGGAAGAGACTCTTTGGTAAATCCCGGTGTGCCAT	1572						
hu. 17-E	1508	TTGCTTGACTGGTGCACCAAGTATCATCTGAATGGCAGAGACTCTCTGGTAAATCCCGGTGTGCCAT	1572						
hu. 6-E	1508	TTGCTTGACTGGTGCACCAAGTATCATCTGAATGGCAGAGACTCTCTGGTAAATCCCGGTGTGCCAT	1572						
hu. 66-E	1508	TTGCTTGACTGGTGCACCAAAATATCACCCTGAACGGAAGAGACTCTTTGGTAAATCCCGGTGTGCCAT	1572						
rh. 38-E	1508	TTGCTTGACTGGTGCACCAAAATATCACCCTGAACGGAAGAGACTCTTTGGTAAATCCCGGTGTGCCAT	1572						
hu. 32-F	1502	TTGCTTGCCCTGGAGCTTCTTCTTGGGCTCTCAATGGACGTAATAGCTTGTATGAATCCTGGACCTGCTAT	1572						
AAV9/hu	1502	TTGCTTGCCCTGGAGCTTCTTCTTGGGCTCTCAATGGACGTAATAGCTTGTATGAATCCTGGACCTGCTAT	1572						
hu. 31-F	1502	TTGCTTGCCCTGGAGCTTCTTCTTGGGCTCTCAATGGACGTAATAGCTTGTATGAATCCTGGACCTGCTAT	1572						
AAV5	1530	CATGACCAACAACCTCCAGGGCAGCAACACCTATGCCCTGGAGAACACTATGATCTTCAACAGCCAGCCG							
AAV3-3	1572	GGCCAGTCACAAGGACGATGAAGAAAATTTTCCCTATGCACGGCAATCTAATATTTGGCAAAGAGGG							
AAV4-4	1569	GGCCACGGCTGGACCTCGGACAGCAAGTTCAGC--AACAGCCAGCTCATCTTTCGGGGCCCTAAACAG							
AAV1-A	1572	GGCCTCACACAAAGACGACGAAGACAAAGTTCTTTCCCATGAGCGGTGTCTATGATTTTGGAAAAGAGAGC							
hu. 46-A	1572	GGCCTCACACAAAGACGACGAAGACAAAGTTCTTTCCCATGAGCGGTGTCTATGATTTTGGAAAAGAGAGC							
hu. 48-A	1572	GGCCTCACACAAAGACGACGAAGACAAAGTTCTTTCCCATGAGCGGTGTCTATGATTTTGGAAAAGAGAGC							
hu. 44-A	1572	GGCCTCACACAAAGACGACGAAGACAAAGTTCTTTCCCATGAGCGGTGTCTATGATTTTGGAAAAGAGAGC							
hu. 43-A	1575	GGCCTCACACAAAGACGACGAAGACAAAGTTCTTTCCCATGAGCGGTGTCTATGATTTTGGAAAAGAGAGC							
AAV6-A	1572	GGCCTCACACAAAGACGACGAAGACAAAGTTCTTTCCCATGAGCGGTGTCTATGATTTTGGAAAAGAGAGC							

FIG. 3BI



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hu. 34-B 1569 GGCAAGCCACAAGGACGATGAAGAAAAGTTTTTCCCTCAGAGCGGGGTTCTCATCTTTGGGAAGCAAGGC  
hu. 47-B 1569 GGCAAGCCACAAGGACATGAAGAAAAGTTTTTCCCTCAGAGCGGGGTTCTCATCTTTGGGAAGCAAGGC  
hu. 29-B 1569 GGCAAGCCACAAGACGATGAAGAAAAGTTTTTCCCTCAGAGCGGGGTTCTTATCTTTGGGAAGCAAGGC  
hu. 63-B 1569 GGCAAGCCACAAGGACGATGAAGAAAAGTTTTTCCCTCAGAGCGGGGTTCTCATCTTTGGAAAACAAGAC  
hu. 56-B 1569 GGCAAGCCACAAGGACGATGAAGAAAAGTTTTTCCCTCAAAGCGGGGTTCTCATCTTTGGGAAGCAAGGC  
hu. 45-B 1569 GGCAAGCCACAAGGACGATGAAGAAAAGTTTTTCCCTCAGAGCGGGGTTCTCATCTTTGGGAAGCAAGGC  
hu. 57-B 1566 GGCAAGCCACAAGGACGATGAAGAAAAGTTTTTCCCTCAAAGCGGGGTTCTCATCTTTGGGAAGCAAGGC  
hu. 35-B 1569 GGCAAGCCACAAGGACGATGAAGAAAAGTTTTTCCCTCAGAGCGGGGTTCTCATCTTTGGGAAGCAAGGC  
hu. 58-B 1569 GGCAAGCCACAAGGACGATGAAGAAAAGTTTTTCCCTCAGAGCGGGGTTCTCATCTTTGGAAAACAAGGA  
hu. 28-B 1569 GGCAAGCCACAAGGACGATGAAGAAAAGTTTTTCCCTCAGAGCGGGGTTCTTATCTTTGGGAAGCAAGGC  
hu. 51-B 1569 GGCAAGCCACAAGGACATGAAGAAAAGTTTTTCCCTCAGAGCGGGGTTCTCATCTTTGGGAAGCAAGGC  
hu. 19-B 1569 GGCAAGCCACAAGGACGATGAAGAAAAGTTTTTCCCTCAGAGCGGGGTTCTCATCTTTGGAAAACAAGAC  
hu. 49-B 1569 GGCAAGCCACAAGGACGATGAAGAAAAGTTTTTCCCTCAAAGCGGGGTTCTCATCTTTGGGAAGCAAGGC  
hu. 52-B 1569 GGCAAGCCACAAGGACATGAAGAAAAGTTTTTCCCTCAGAGCGGGGTTCTCATCTTTGGGAAGCAAGGC  
hu. 13-B 1569 GGCAAGCCACAAGGACGATGAAGAAAAGTTTTTCCCTCAGAGCGGGGTTCTCATCTTTGGGAAGCAAGGC  
AAV2-B 1569 GGCAAGCCACAAGGACGATGAAGAAAAGTTTTTCCCTCAGAGCGGGGTTCTCATCTTTGGGAAGCAAGGC  
hu. 20-B 1569 GGCAAGCCACAAGGACGATGAAGAAAAGTTTTTCCCTCAGAGCGGGGTTCTCATCTTTGGAAAACAAGAC  
hu. 24-B 1569 GGCAAGCCACAAGGACGATGAAGAAAAGTTTTTCCCTCAGAGCGGGGTTCTCATCTTTGGAAAACAAGAC  
hu. 64-B 1569 GGCAAGCCACAAGGACGATGAAGAAAAGTTTTTCCCTCAGAGCGGGGTTCTCATCTTTGGAAAACAAGAC  
hu. 27-B 1569 GGCAAGCCACAAGGACGATGAAGAAAAGTTTTTCCCTCAGAGCGGGGTTCTCGTCTTTGGAAAACAAGAC  
hu. 21-B 1569 GGCAAGCCACAAGGACGATGAAGAAAAGTTTTTCCCTCAGAGCGGGGTTCTCATCTTTGGAAAACAAGAC  
hu. 22-B 1569 GGCAAGCCACAAGGACGATGAAGAAAAGTTTTTCCCTCAGAGCGGGGTTCTCATCTTTGGAAAACAAGAC  
hu. 23-B 1569 GGCAAGCCACAAGGACGATGAAGAAAAGTTTTTCCCTCAGAGCGGGGTTCTCATCTTTGGAAAACAAGAC  
hu. 7-C 1569 GGCAAGCCACAAGGACGATGAAGAAAAGTTTTTCCCTCAGAGCGGGGTTCTCATCTTTGGTAAACAAGGA  
hu. 61-C 1569 GGCAAGCCACAAGGATGACGAAGAAAAGTTTTTCCCTCAGAGCGGGGTTCTCATCTTTGGTAAACAAGGA  
rh. 56-C 1569 GGCAAGCCACAAGGACGATGAAGAAAAGTTTTTCCCTCAGAGCGGGGTTCTCATCTTTGGTAAACAAGGA  
hu. 9-C 1569 GGCAAGCCACAAGGACGATGAAGAAAAGTTTTTCCCTCAGAGCGGGGTTCTCATCTTTGGTAAACAAGGA  
hu. 54-C 1566 GGCAAGCCACAAGGACGATGAAGAAAAGTTTTTCCCTCAGAGCGGGGTTCTCATCTTTGGTAAACAAGGA  
hu. 53-C 1566 GGCAAGCCACAAGGACGATGAAGAAAAGTTTTTCCCTCAGAGCGGGGTTCTCATCTTTGGTAAAGGAAGGA  
hu. 60-C 1569 GGCAAGCCACAAGGATGACGAAGAAAAGTTTTTCCCTCAGAGCGGGGTTCTCATCTTTGGTAAACAAGGA

FIG. 3BM

hu.55-C	1566	GGCCAGCCACAAGGACGATGAAGAAAAGTTTTTCCCATGCATGAACCCCTAATATTTGGTAAAGAAGGA
hu.2-C	1569	GGCCAGTCACAAGGATGACGAAGAAAAGTTTTTCCCATGCATGAACCCCTGATATTTGGTAAACAAGGA
hu.1-C	1569	GGCCAGTCACAAGGATGACGAAGAAAAGTTTTTCCCATGCATGAACCCCTGATATTTGGTAAACAAGGA
hu.18-C	1569	GGCCAGCCACAAGACGATGAAGAAAAGTTTTTCCCATGCATGAACCCCTGATATTTGGTAAACAAGGA
hu.3-C	1572	GGCCAGTCACAAGGATGACGAAGAAAAGTTTTTCCCATGCATGAACCCCTGATATTTGGTAAACAAGGA
hu.25-C	1569	GGCCAGTCACAAGGATGACGAAGAAAAGTTTTTCCCATGCATGAACCCCTGATATTTGGTAAACAAGGA
hu.15-C	1569	GGCCAGCCACAAGACGATGAAGAAAAGTTTTTCCCATGCATGAACCCCTGATATTTGGTAAACAAGGA
hu.16-C	1569	GGCCAGCCACAAGACGATGAAGAAAAGTTTTTCCCATGCATGAACCCCTGATATTTGGTAAACAAGGA
hu.11-C	1569	GGCCAGCCACAAGACGATGAAGAAAAGTTTTTCCCATGCATGAACCCCTGATATTTGGTAAACAAGGA
hu.10-C	1569	GGCCAGCCACAAGACGATGAAGAAAAGTTTTTCCCATGCATGAACCCCTGATATTTGGTAAACAAGGA
hu.4-C	1569	GGCCAGTCACAAGGATGACGAAGAAAAGTTTTTCCCATGCATGAACCCCTGATATTTGGTAAACAAGGA
rh.54-D	1578	GGCAACTCACAAAGGACGACGAGGACCGCTTTTCCCATCCAGCGGAGTCTCTGATTTTGGAAAACTGGA
rh.48-D	1578	GGCAACCCACAAGGACGACGAGGACCGCTTCTTCCCTTCGAGCGGAGTCTCTGATTTTGGAAAACTGGA
rh.55-D	1578	GGCAACCCACAAGGACGACGAGGACCGCTTCTTCCCTTCGAGCGGAGTCTCTGATTTTGGAAAACTGGA
rh.62-D	1578	GGCAACCCACAAGGACGACGAGGACCGCTTCTTCCCTTCGAGCGGAGTCTCTGATTTTGGAAAACTGGA
AAV7-D	1578	GGCAACTCACAAAGGACGACGAGGACCGCTTTTCCCATCCAGCGGAGTCTCTGATTTTGGAAAACTGGA
rh.52-E	1578	GGCAACCAACAAGGACGACGAGGACCGCTTCTTCCATCCAGCGGATCCTCATGTTTGGCAAGCAGGGA
rh.51-E	1578	GGCAACCAACAAGGACGACGAGGACCGCTTCTTCCATCCAGCGGATCCTCATGTTTGGCAAGCAGGGA
hu.39-E	1578	GGCAACCAACAAGGACGACGAGGACCGCTTCTTCCATCCAGCGGATCCTCATGTTTGGCAAGCAGGGA
rh.53-E	1578	GGCAACCAACAAGGACGACGAGGACCGCTTCTTCCATCCAGCGGATCCTCATGTTTGGCAAGCAGGGA
hu.37-E	1578	GGCAACCCACAAGGACGACGAGGACCGCTTCTTCCGTCGAGTGGAGTCTCTGATGTTTCGAAAAACAGGGT
rh.43-E	1575	GGCAACACACAAGACGACGAGGAGCGCTTTTCCCAGTAACGGGA--TCCTGTTTTGGCAACAATAAT
rh.50-E	1578	GGCAACCAACAAGGACGACGAGGACCGCTTCTTCCATCCAGCGGATCCTCATGTTTGGCAAGCAGGGA
rh.49-E	1578	GGCAACCAACAAGGACGACGAGGACCGCTTCTTCCATCCAGCGGATCCTCATGTTTGGCAAGCAGGGA
rh.61-E	1578	GGCAACCAACAAGGACGACGAGGACCGCTTCTTCCATCCAGCGGATCCTCATGTTTGGCAAGCAGGGA
hu.41-E	1578	GGCAACCCACAAGGACGACGAGGACCGCTTCTTCCGTCGAGTGGAGTCTCTGATGTTTGGAAAAACAGGGT
rh.64-E	1578	GGCAACCAACAAGGACGACGAGGACCGCTTCTTCCATCCAGCGGATCCTCATGTTTGGCAAGCAGGGA
hu.42-E	1578	GGCAACCCACAAGGACGACGAGGACCGCTTCTTCCGTCGAGTGGAGTCTCTGATGTTTGGAAAAACAGGGT
rh.57-E	1578	GGCAACCAACAAGGACGACGAGGACCGCTTCTTCCATCCAGCGGATCCTCATGTTTGGCAAGCAGGGA
hu.40-E	1578	GGCAACCCACAAGGACGACGAGGACCGCTTCTTCCGTCGAGTGGAGTCTCTGATGTTTGGAAAAACAGGGT

FIG. 3BN

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AAV8-E	1578	GGCAACACACAAGACGACGAGGAGCGTTT	1690	1700	1710	1720	1730	1740	1750
rh. 58-E	1578	GGCAACCAACAAGGACGACGAGGACCGCTT	1690	1700	1710	1720	1730	1740	1750
rh. 40-E	1578	GGCAACGCATAAGGACGACGAGGAACGTTT	1690	1700	1710	1720	1730	1740	1750
hu. 67-E	1578	GGCAACCCACAAGGACGACGAGGAACGCTT	1690	1700	1710	1720	1730	1740	1750
hu. 17-E	1578	GGCAACGCACAAGGACGACGAGAGCGATT	1690	1700	1710	1720	1730	1740	1750
hu. 6-E	1578	GGCAACGCACAAGGACGACGAGAGCGATT	1690	1700	1710	1720	1730	1740	1750
hu. 66-E	1578	GGCAACCCACAAGGACGACGAGGAACGCTT	1690	1700	1710	1720	1730	1740	1750
rh. 38-E	1578	GGCAACCCACAAGGACGACGAGGAACGCTT	1690	1700	1710	1720	1730	1740	1750
hu. 32-F	1572	GGCCAGCCACAAGAGGAGGAGGACCGTTT	1690	1700	1710	1720	1730	1740	1750
AAV9/hu	1572	GGCCAGCCACAAGAGGAGGAGGACCGTTT	1690	1700	1710	1720	1730	1740	1750
hu. 31-F	1572	GGCCAGCCACAAGAGGAGGAGGACCGTTT	1690	1700	1710	1720	1730	1740	1750
AAV5	1600	CGGAACCCGGGCACCAACCGCCACGTACCT	1690	1700	1710	1720	1730	1740	1750
AAV3-3	1642	ACA-----ACGGCAAGTAACGCAGAAATT	1690	1700	1710	1720	1730	1740	1750
AAV4-4	1636	AAC-----GGCAACACGCGCCACCGTACC	1690	1700	1710	1720	1730	1740	1750
AAV1-A	1642	GCC-----GGAGCTTCAAACACTGCAATT	1690	1700	1710	1720	1730	1740	1750
hu. 46-A	1642	GCC-----GGAGCTTCAAACACTGCAATT	1690	1700	1710	1720	1730	1740	1750
hu. 48-A	1642	GCC-----GGAGCTTCAAACACTGCAATT	1690	1700	1710	1720	1730	1740	1750
hu. 44-A	1642	GCC-----GGAGCTTCAAACACTGCAATT	1690	1700	1710	1720	1730	1740	1750
hu. 43-A	1645	GCC-----GGAGCTTCAAACACTGCAATT	1690	1700	1710	1720	1730	1740	1750
AAV6-A	1642	GCC-----GGAGCTTCAAACACTGCAATT	1690	1700	1710	1720	1730	1740	1750
hu. 34-B	1639	TCA-----GAGAAAACAATGTGGACATT	1690	1700	1710	1720	1730	1740	1750
hu. 47-B	1639	TCA-----GAGAAAACAATGTGGACATT	1690	1700	1710	1720	1730	1740	1750
hu. 29-B	1639	CCA-----GAGAAAACAATGTGGATATT	1690	1700	1710	1720	1730	1740	1750
hu. 63-B	1639	TCG-----GGAATAACTAATGTGGACATT	1690	1700	1710	1720	1730	1740	1750
hu. 56-B	1639	TCA-----GAGAAAACAATGTGGACATT	1690	1700	1710	1720	1730	1740	1750
hu. 45-B	1639	TCA-----GAGAAAACAATGTGGACATT	1690	1700	1710	1720	1730	1740	1750
hu. 57-B	1636	TCA-----GAGAAAACAATGTGGACATT	1690	1700	1710	1720	1730	1740	1750

FIG. 3B

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hu.35-B 1639 TCA-----GAGAAACAAATGTGGACATTGAA---AAGGTCATGATTACAGACGAAGAGGAAATCAGGA  
 hu.58-B 1639 TCA-----GAGAAACAAATGTGGACATTGAA---AAGGTCATGATTACAGACGAAGAGGAAATCAGAA  
 hu.28-B 1639 TCA-----GAGAAACAAATGTGGATATTGAA---AAGGTCATGATTACAGACGAAGAGGAAATCAGGA  
 hu.51-B 1639 TCA-----GAGAAACAAATGTGGACATTGAA---AAGGTCATGATTACAGACGAAGAGGAAATCAGGA  
 hu.19-B 1639 TCG-----GGAAAACTAATGTGGACATTGAA---AAGGTTATGATTACAGACGAAGAGGAAATCAGGA  
 hu.49-B 1639 TCA-----GAGAAACAAATGTGGACATTGAA---AAGGTCATGATTACAGACGAAGAGGAAATCAGAA  
 hu.52-B 1639 TCA-----GAGAAACAAATGTGGACATTGAA---AAGGTCATGATTACAGACGAAGAGGAAATCAGGA  
 hu.13-B 1639 TCA-----GAGAAACAAATGTGGACATTGAA---AAGGTCATGATTACAGACGAAGAGGAAATCAGGA  
 AAV2-B 1639 TCA-----GAGAAACAAATGTGGACATTGAA---AAGGTCATGATTACAGACGAAGAGGAAATCAGGA  
 hu.20-B 1639 TCG-----GGAAAACTAATGTGGACATTGAA---AAGGTTATGATTACAGACGAAGAGGAAATCAGGA  
 hu.24-B 1639 TCG-----GGAAAACTAATGTGGACATTGAA---AAGGTTATGATTACAGACGAAGAGGAAATCAGGA  
 hu.64-B 1639 TCG-----GGAAAACTAATGTGGACATTGAA---AAGGTCATGATTACAGACGAAGAGGAAATCAGGA  
 hu.27-B 1639 TCG-----GGAAAACTAATGTGGACATTGAA---AAGGTTATGATTACAGACGAAGAGGAAATCAGGA  
 hu.21-B 1639 TCG-----GGAAAACTAATGTGGACATTGAA---AAGGTTATGATTACAGACGAAGAGGAAATCAGGA  
 hu.22-B 1639 TCG-----GGAAAACTAATGTGGACATTGAA---AAGGTTATGATTACAGACGAAGAGGAAATCAGGA  
 hu.23-B 1639 TCG-----GGAAAACTAATGTGGACATTGAA---AAGGTTATGATTACAGACGAAGAGGAAATCAGGA  
 hu.7-C 1639 ACA-----AATGCTAACGACGCGGATTGGAC---AATGTCATGATTACAGATGAAGAAAGAAATCCGCA  
 hu.61-C 1639 ACA-----AATGCCAACGACGCGGATTGGAA---AATGTCATGATTACAGATGAAGAAAGAAATCAGGA  
 rh.56-C 1639 ACA-----AATGCTAACGACGCGGATTGGAC---AATGTCATGATTACAGATGAAGAAAGAAATCCGCA  
 hu.9-C 1639 ACA-----AATGCTAACGACGCGGATTGGAG---CATGTTATGATTACAGATGAAGAAAGAAATCAGGA  
 hu.54-C 1636 ACA-----AATGCTACCAACGCGGAATTGGAA---AATGTCATGATTACAGATGAAGAGGAAATCAGGA  
 hu.53-C 1636 ACA-----AATGCTACCAACGCGGAATTGGAA---AATGTCATGATTACAGATGAAGAGGAAATCAGGA  
 hu.60-C 1639 ACA-----AATGCCAACGACGCGGATTGGAA---AATGTCATGATTACAGATGAAGAAAGAAATCAGGA  
 hu.55-C 1636 ACA-----AATGCTACCAACGCGGAATTGGAA---AATGTCATGATTACAGATGAAGAGGAAATCAGGA  
 hu.2-C 1639 ACA-----AATGCCAACGACGCGGATTGGAA---AATGTCATGATTACAGATGAAGAAAGAAATCAGGG  
 hu.1-C 1639 ACA-----AATGCCAACGACGCGGATTGGAA---AATGTCATGATTACAGATGAAGAAAGAAATCAGGG  
 hu.18-C 1639 ACA-----AATGCTAACGACGCGGATTGGAC---AATGTCATGATTACAGATGAAGAAAGAAATCCGCA  
 hu.3-C 1642 ACA-----AATGCCAACGACGCGGATTGGAA---AATGTCATGATTACAGATGAAGAAAGAAATCAGGC  
 hu.25-C 1639 ACA-----AATGCCAACGACGCGGATTGGAA---AATGTCATGATTACAGATGAAGAAAGAAATCAGGA  
 hu.15-C 1639 ACA-----AATGCTAACGACGCGGATTGGAC---AATGTCATGATTACAGATGAAGAAAGAAATCCGCA

FIG. 3B9

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hu.16-C 1639 ACA-----AATGCTAACGACGCGGATTGGAC---AATGTCATGATTACAGATTGAAGAAGAAATCCGCA  
 hu.11-C 1639 ACA-----AATGCTAACGACGCGGATTGGAG---CATGTTATGATTACAGATTGAAGAAGAAATCAGGA  
 hu.10-C 1639 ACA-----AATGCTAACGACGCGGATTGGAG---CATGTTATGATTACAGATTGAAGAAGAAATCAGGA  
 hu.4-C 1639 ACA-----AATGCCAACGACGCGGATTGGAA---AATGTCATGATTACAGATTGAAGAAGAAATCAGGG  
 rh.54-D 1648 GCA-----ACCAAC---AAGACTACATTGGAA---AACGTGTTAATGACAAATGAAGAAGAAATTCGTC  
 rh.48-D 1648 GCA-----GCTAAT---AAGACTACACTGGAA---AATGTGTTAATGACAAATGAAGAAGAAATTCGTC  
 rh.55-D 1648 GCA-----GCTAAT---AAGACTACACTGGAA---AATGTGTTAATGACAAATGAAGAAGAAATTCGTC  
 rh.62-D 1648 GCA-----GCTAAT---AAGACTACACTGGAA---AATGTGTTAATGACAAATGAAGAAGAAATTCGTC  
 AAV7-D 1648 GCA-----ACTAAC---AAAACACTACTGGAA---AATGTGTTAATGACAAATGAAGAAGAAATTCGTC  
 rh.52-E 1648 GCT-----GGAAAAGACAAACGTGGACTATAGC---AACGTGATGCTAACCCAGCGGAGGAAATCAAGA  
 rh.51-E 1648 GCT-----GGAAAAGACAAACGTGGACTATAGC---AACGTGATGCTAACCCAGCGGAGGAAATCAAGA  
 hu.39-E 1648 GCT-----GGAAAAGACAAACGTGGACTATAGC---AACGTGATGCTAACCCAGCGGAGGAAATCAAGA  
 rh.53-E 1648 GCT-----GGAAAAGACAAACGTGGACTATAGC---AACGTGATGCTAACCCAGCGGAGGAAATCAAGA  
 hu.37-E 1648 GCT-----GGAAGAGACAAATGTGGACTACAGC---AGCGTTATGCTAACCCAGCGGAGGAAATCAAAA  
 rh.43-E 1642 GCT-----GCCAGAGACAAATGCGGATTACAGC---GATGTCATGCTCACCCAGCGGAGGAAATCAAAA  
 rh.50-E 1648 GCT-----GGAAAAGACAAACGTGGACTATAGC---AACGTGATGCTAACCCAGCGGAGGAAATCAAGA  
 rh.49-E 1648 GCT-----GGAAGAAGACAAATGCGGCTATAGC---AACGTGATGCTAACCCAGCGGAGGAAATCAAGA  
 rh.61-E 1648 GCT-----GGAAGAAGACAAACGTGGACTATAGC---AACGTGATGCTAACCCAGCGGAGGAAATCAAGA  
 hu.41-E 1648 GCT-----GGAAGAGACAAATGTGGACTACAGC---AGCGTTATGCTAACCCAGCGGAGGAAATCAAAA  
 rh.64-E 1648 GCT-----GGAAGAAGACAAACGTGGACTATAGC---AACGTGATGCTAACCCAGCGGAGGAAATCAAGA  
 hu.42-E 1648 GCT-----GGAAGAGACAAATGTGGACTACAGC---AGCGTTATGCTAACCCAGCGGAGGAAATCAAAA  
 rh.57-E 1648 GCT-----GGAAGAAGACAAACGTGGACTATAGC---AACGTGATGCTAACCCAGCGGAGGAAATCAAGA  
 hu.40-E 1648 GCT-----GGAAGAGACAAATGTGGACTACAGC---AGCGTTATGCTAACCCAGCGGAGGAAATCAAAA  
 AAV8-E 1648 GCT-----GCCAGAGACAAATGCGGATTACAGC---GATGTCATGCTCACCCAGCGGAGGAAATCAAAA  
 rh.58-E 1648 GCT-----GGAAGAAGACAAACGTGGACTATAGC---AACGTGATGCTAACCCAGCGGAGGAAATCAAGA  
 rh.40-E 1648 GCT-----GGAAGAGACAAATGTGGACTATAGC---AGCGTTATGCTAACCCAGCGGAGGAAATCAAAA  
 hu.67-E 1648 GCT-----GGAAGAGACAAATGTGGACTACAGC---AGCGTTATGCTAACCCAGCGGAGGAAATCAAAA  
 hu.17-E 1648 GCT-----GGAAGAAGACAAACGTGGACTATAGC---AGCGTTATGCTAACCCAGCGGAGGAAATCAAAA  
 hu.6-E 1648 GCT-----GGAAGAAGACAAACGTGGACTATAGC---AGCGTTATGCTAACCCAGCGGAGGAAATCAAAA  
 hu.66-E 1648 GCT-----GGAAGAGACAAATGTGGACTACAGC---AGCGTTATGCTAACCCAGCGGAGGAAATCAAAA

FIG. 3B

rh.38-E	1648	GCT-----GGAAGAGACAATGTGGACTACAGC---AGCGTTATGCTAACGCGAAGAAGAAATTAAAA	1760	1770	1780	1790	1800	1810	1820
hu.32-F	1642	ACT-----GGAAGAGACAACGTGGATGCGGAC---AAAGTCATGATAACCAACGAAGAAGAAATTAAAA							
AAV9/hu	1642	ACT-----GGAAGAGACAACGTGGATGCGGAC---AAAGTCATGATAACCAACGAAGAAGAAATTAAAA							
hu.31-F	1642	ACT-----GGAAGAGACAACGTGGATGCGGAC---AAAGTCATGATAACCAACGAAGAAGAAATTAAAA							
AAV5	1670	CGGTGAACCCGCGTGGCGTACAACGTCGGCGGGCAGATGGCCACCAACAACCCAGAGCTCCACCACCTGCCCC	..... ..... ..... ..... ..... ..... ..... ..... ..... .....						
AAV3-3-	1703	CCACCAATCCTGTGGCAACAGAGCAGTATGGAACCTGTGGCAAAATAACTTGCAGAGCTCAATATACAGCTCC							
AAV4-4-	1697	CCACCAACGCCACCGATACGGACATGTGGGCAACCTACCTGGCGGTGACCCAGAGCAACAGCAACCTGCC							
AAV1-A	1703	CCACTAACCCCTGTGGCCACCCGAAAGATTGGGACCGTGGCAGTCAATTTCCAGAGCAGCAGCAGACCC							
hu.46-A	1703	CCACTAACCCCTGTGGCCACCCGAAAGATTGGGACCGTGGCAGTCAATTTCCAGAGCAGCAGCAGACCC							
hu.48-A	1703	CCACTAACCCCTGTGGCCACCCGAAAGATTGGGACCGTGGCAGTCAATTTCCAGAGCAGCAGCAGACCC							
hu.44-A	1703	CCACTAACCCCTGTGGCCACCCGAAAGATTGGGACCGTGGCAGTCAATTTCCAGAGCAGCAGCAGACCC							
hu.43-A	1706	CCACTAACCCCTGTGGCCACCCGAAAGATTGGGACCGTGGCAGTCAATTTCCAGAGCAGCAGCAGACCC							
AAV6-A	1703	CCACTAACCCCTGTGGCCACCCGAAAGATTGGGACCGTGGCAGTCAATTTCCAGAGCAGCAGCAGACCC							
hu.34-B	1700	CAACCAATCCCCTGGCTACGGAGCAGTATGGTTCTGTATCTACCAACCTCCAGAGAGGCAACAGACAAGC							
hu.47-B	1700	CAACCAATCCCCTGGCTACGGAGCAGTATGGTTCTGTATCTACCAACCTCCAGAGAGGCAACAGACAAGC							
hu.29-B	1700	CCACCAATCCCCTGGCTACGGAGCAGTATGGTTCTGTATCTACCAACCTCCAGAGAGGCAACAGACAAGC							
hu.63-B	1700	CCACCAATCCCCTGGCTACGGAGCAGTATGGTTCTGTATCTACCAACCTCCAGAGAGGCAACAGACAAGC							
hu.56-B	1700	CCACCAATCCCCTGGCTACGGAGCAGTATGGTTCTGTATCTACCAACCTCCAGAGAGGCAACAGACAAGC							
hu.45-B	1700	CAACCAATCCCCTGGCTACGGAGCAGTATGGTTCTGTATCTACCAACCTCCAGAGAGGCAACAGACAAGC							
hu.57-B	1697	CCACCAATCCCCTGGCTACGGAGCAGTATGGTTCTGTATCTACCAACCTCCAGAGAGGCAACAGACAAGC							
hu.35-B	1700	CAACCAATCCCCTGGCTACGGAGCAGTATGGTTCTGTATCTACCAACCTCCAGAGAGGCAACAGACAAGC							
hu.58-B	1700	CCACCAATCCCCTGGCTACGGAGCAGTATGGTTCTGTATCTACCAACCTCCAGAGAGGCAACAGACAAGC							
hu.28-B	1700	CCACCAATCCCCTGGCTACGGAGCAGTATGGTTCTGTATCTACCAACCTCCAGAGAGGCAACAGACAAGC							
hu.51-B	1700	CAACCAATCCCCTGGCTACGGAGCAGTACGGTTCTGTATCTACCAACCTCCAGAGAGGCAACAGACAAGC							
hu.19-B	1700	CCACCAATCCCCTGGCTACGGAGCAGTATGGTTCTGTATCTACCAACCTCCAGAGAGGCAACAGACAAGC							
hu.49-B	1700	CCACCAATCCCCTGGCTACGGAGCAGTATGGTTCTGTATCTACCAACCTCCAGAGAGGCAACAGACAAGC							
hu.52-B	1700	CAACCAATCCCCTGGCTACGGAGCAGTATGGTTCTGTATCTACCAACCTCCAGAGAGGCAACAGACAAGC							

FIG. 3B

hu.13-B 1700 CCACCAATCCCGTGGCTACGGAGCAGTATGGTTCTGTATCTACCAACCTGCAGGGGGGCAACACACAAGC  
 AAV2-B 1700 CAACCAATCCCGTGGCTACGGAGCAGTATGGTTCTGTATCTACCAACCTCCAGAGAGGCAACACACAAGC  
 hu.20-B 1700 CCACCAATCCCGTGGCTACGGAGCAGTATGGTTCTGTATCTACCAACCTCCAGAGCGGCAACACAAGC  
 hu.24-B 1700 CCACCAATCCCGTGGCTACGGAGCAGTATGGTTCTGTATCTACCAACCTCCAGAGCGGCAACACAAGC  
 hu.64-B 1700 CCACCAATCCCGTGGCTACGGAGCAGTATGGTTCTGTATCTACCAACCTCCAGAGCGGCAACACAAGC  
 hu.27-B 1700 CCACCAATCCCGGCTACGGAGCAGTATGGTTCTGTATCTACCAACCTCCAGAGCGGCAACACAAGC  
 hu.21-B 1700 CCACCAATCCCGTGGCTACGGAGCAGTATGGTTCTGTATCTACCAACCTCCAGAGCGGCAACACAAGC  
 hu.22-B 1700 CCACCAATCCCGTGGCTACGGAGCAGTATGGTTCTGTATCTACCAACCTCCAGAGCGGCAACACAAGC  
 hu.23-B 1700 CCACCAATCCCGTGGCTACGGAGCAGTATGGTTCTGTATCTACCAACCTCCAGAGCGGCAACACAAGC  
 hu.7-C 1700 CCACCAATCCCGTGGCTACGGAGCAGTACGGATATGTGCAAAATAATTTGCAAAACTCAAATACTGGTCC  
 hu.61-C 1700 CCACCAATCCCGTGGCTACGGAGCAGTACGGAACTGTATCAAATAATTTGCAAAACTCAAATACTGGTCC  
 rh.56-C 1700 CCACCAATCCCGTGGCTACGGAGCAGTACGGATATGTGCAAAATAATTTGCAAAACTCAAATACTGGTCC  
 hu.9-C 1700 CCACCAATCCCGTGGCTACAGAGCAGTACGGAACTGTGCAAAATAATTTGCAAAACTCAAATACTGGTCC  
 hu.54-C 1697 CCACCAATCCCGTGGCTACAGAGCAGTACGGATATGTGCAAAATAATTTGCAAAACTCAAATACTGGTCC  
 hu.53-C 1697 CCACCAATCCCGTGGCTACAGAGCAGTACGGATATGTGCAAAATAATTTGCAAAACTCAAATACTGGTCC  
 hu.60-C 1700 CCACCAATCCCGTGGCTACGGAGCAGTACGGAACTGTATCAAATAATTTGCAAAACTCAAATACTGGTCC  
 hu.55-C 1697 CCACCAATCCCGTGGCTACAGAGCAGTACGGATATGTGCAAAATAATTTGCAAAACTCAAATACTGGTCC  
 hu.2-C 1700 CCACCAATCCCGTGGCTACGGAGCAGTACGGGACTGTGCAAAATAATTTGCAAAACTCAAATACTGGTCC  
 hu.1-C 1700 CCACCAATCCCGTGGCTACGGAGCAGTACGGGACTGTGCAAAATAATTTGCAAAACTCAAATACTGGTCC  
 hu.18-C 1700 CCACCAATCCCGTGGCTACGGAGCAGTACGGATATGTGCAAAATAATTTGCAAAACTCAAATACTGGTCC  
 hu.3-C 1703 CCACCAATCCCGTGGCTACGGAGCAGTACGGGACTGTGCAAAATAATTTGCAAAACTCAAATACTGGTCC  
 hu.25-C 1700 CCACCAATCCCGTGGCTACGGAGCAGTACGGGACTGTGCAAAATAATTTGCAAAACTCAAATACTGGTCC  
 hu.15-C 1700 CCACCAATCCCGTGGCTACGGAGCAGTACGGATATGTGCAAAATAATTTGCAAAACTCAAATACTGGTCC  
 hu.16-C 1700 CCACCAATCCCGTGGCTACGGAGCAGTACGGATATGTGCAAAATAATTTGCAAGACTCAAATACTGGTCC  
 hu.11-C 1700 CCACCAATCCCGTGGCTACAGAGCAGTACGGAACTGTGCAAAATAATTTGCAAAACTCAAATACTGGTCC  
 hu.10-C 1700 CCACCAATCCCGTGGCTACAGAGCAGTACGGAACTGTGCAAAATAATTTGCAAAACTCAAATACTGGTCC  
 hu.4-C 1700 CCACCAATCCCGTGGCTACGGAGCAGTACGGGACTGTGCAAAATAATTTGCAAAACTCAAATACTGGTCC  
 rh.54-D 1706 CTACTAATCCTGTGGCCACAGAAGAAATACGGGATAGTCAGCAGCAATTTACAAGCGGCCAATACTGCAGC  
 rh.48-D 1706 CTACCAACCCGGTAGCCACCGAGGAATACGGGACTGTAGCAGCAACCTGCAGCGGGCTAACACTGCAGC  
 rh.55-D 1706 CTACCAACCCGGTAGCCACCGAGGAATACGGGACTGTAGCAGCAACCTGCAGCGGGCTAACACTGCAGC



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rh. 62-D	1706	CTACCAACCCGGTAGCCACCAGGAATACGGGACTGTTAGCAGCAACCTGCAGGGGGCTAACACTGCAGC	1830	1840	1850	1860	1870	1880	1890
AAV7-D	1706	CTACTAATCCTGTAGCCACGGAAGATACGGGATAGTCAGCAGCAACTTACAAGCGGGCTAATACTGCAGC							
rh. 52-E	1709	CCACCAACCCCGTGGCCACAGAACAGTATGGCGTGGTGGCTGATAACCTACAGCAGCAAAACACCGCTCC							
rh. 51-E	1709	CCACCAACCCCGTGGCCACAGAACAGTATGGCGTGGTGGCTGATAACCTACAGCAGCAAAACACCGCTCC							
hu. 39-E	1709	CCACCAACCCCGTGGCCACAGAACAGTATGGCGTGGTGGCTGATAACCTACAGCAGCAAAACACCGCTCC							
rh. 53-E	1709	CCACCAACCCCGTGGCCACAGAACAGTATGGCGTGGTGGCTGATAACCTACAGCAGCAAAACACCGCTCC							
hu. 37-E	1709	CCACTAACCCCGTAGCCACAGAACATACGGTGGTGGCTGACAACTTGACGCAAAACCAATACAGGGCC							
rh. 43-E	1703	CCACTAACCCCGTAGCCACAGAACATACGGTGGTGGCTGATAACCTTGACGAGCAAAACACCGCTCC							
rh. 50-E	1709	CCACCAACCCCGTGGCCACAGAACAGTATGGCGTGGTGGCTGATAACCTACAGCAGCAAAACACCGCTCC							
rh. 49-E	1709	CCACCAACCCCGTGGCCACAGAACAGTATGGCGTGGTGGCTGATAACCTACAGCAGCAAAACACCGCTCC							
rh. 61-E	1709	CCACCAACCCCGTGGCCACAGAACAGTATGGCGTGGTGGCTGATAACCTACAGCAGCAAAACACCGCTCC							
hu. 41-E	1709	CCACTAACCCCGTAGCCACAGAACATACGGTGGTGGCTGACAACTTGACGCAAAACCAATACAGGGCC							
rh. 64-E	1709	CCACCAACCCCGTGGCCACAGAACAGTATGGCGTGGTGGCTGATAACCTACAGCAGCAAAACACCGCTCC							
hu. 42-E	1709	CCACTAACCCCGTAGCCACAGAACATACGGTGGTGGCTGACAACTTGACGCAAAACCAATACAGGGCC							
rh. 57-E	1709	CCACCAACCCCGTGGCCACAGAACAGTATGGCGTGGTGGCTGATAACCTACAGCAGCAAAACACCGCTCC							
hu. 40-E	1709	CCACTAACCCCGTAGCCACAGAACATACGGTGGTGGCTGACAACTTGACGCAAAACCAATACAGGGCC							
AAV8-E	1709	CCACTAACCCCGTAGCCACAGAACATACGGTGGTGGCTGATAACCTTGACGAGCAAAACACCGCTCC							
rh. 58-E	1709	CCACCAACCCCGTGGCCACAGAACAGTATGGCGTGGTGGCTGATAACCTACAGCAGCAAAACACCGCTCC							
rh. 40-E	1709	CCACTAACCCCGTAGCCACAGAACATACGGTGGTGGCTGACAACTTGACGCAAGCCAATACAGGGCC							
hu. 67-E	1709	CCACTAACCCCGTAGCCACAGAACATACGGTGGTGGCTGACAACTTGACGCAAAACCAATACAGGGCC							
hu. 17-E	1709	CCACCAACCCCGTAGCCACAGAACAGTACGGCGTGGTGGCGGATAACCTTGCAACAGCAAAACGCCGCTCC							
hu. 6-E	1709	CCACCAACCCCGTAGCCACAGAACAGTACGGCGTGGTGGCGGATAACCTTGCAACAGCAAAACGCCGCTCC							
hu. 66-E	1709	CCACTAACCCCGTAGCCACAGAACATACGGTGGTGGCTGACAACTTGACGCAAAACCAATACAGGGCC							
rh. 38-E	1709	CCACTAACCCCGTAGCCACAGAACATACGGTGGTGGCTGACAACTTGACGCAAAACCAATACAGGGCC							
hu. 32-F	1703	CTACTAACCCCGTAGCAACGGAGTCCTATGGACAAGTGGCCACAAACCACAGAGTGCCCAAGCACAGGC							
AAV9/hu	1703	CTACTAACCCCGTAGCAACGGAGTCCTATGGACAAGTGGCCACAAACCACAGAGTGCCCAAGCACAGGC							
hu. 31-F	1703	CTACTAACCCCGTAGCAACGGAGTCCTATGGACAAGTGGCCACAAACCACAGAGTGCCCAAGCACAGGC							

.....|.....|.....|.....|.....|.....|.....|.....|.....|.....|

FIG. 3B1

AAV5 1740 CGGACCGGCACGTACAACCTCCAGGAAATCGTGCCCGGCAGCGTGTGGATGGAGAGGACGTGTACCTC  
AAV3-3 1773 CACGACTGGAACTGTCAATCATCAGGGGGCCCTTACCTGGCATGGTGTGGCAAGATCGTGACGTGTACCTT  
AAV4-4 1767 GACCGTGACAGACTGACAGCCTTGGAGCCGTGCTGGAATGGTCTGGCAAAACAGAGACATTTACTAC  
AAV1-A 1773 TGCACCGGAGATGTGCATGCTATGGAGCATTACCTGGCATGGTGTGGCAAGATAGAGACGTGTACCTG  
hu.46-A 1773 TGCACCGGAGATGTGCATGCTATGGAGCATTACCTGGCATGGTGTGGCAAGATAGAGACGTGTACCTG  
hu.48-A 1773 TGCACCGGAGATGTGCATGCTATGGAGCATTACCTGGCATGGTGTGGCAAGATAGAGACGTGTACCTG  
hu.44-A 1773 TGCACCGGAGATGTGCATGCTATGGAGCATTACCTGGCATGGTGTGGCAAGATAGAGACGTGTACCTG  
hu.43-A 1776 TGCACCGGAGATGTGCATGCTATGGAGCATTACCTGGCATGGTGTGGCAAGATAGAGACGTGTACCTG  
AAV6-A 1773 TGCACCGGAGATGTGCATGTTATGGAGCCCTTACCTGGAATGGTGTGGCAAGACAGACGTATACCTG  
hu.34-B 1770 AGTACCGCAGATGTCAACACACACAAAGCGTTCTTCCAGGCATGGTCTGGCAGGACAGACGTGTACCTT  
hu.47-B 1770 AGTACCGCAGATGTCAACACACACAAAGCGTTCTTCCAGGCATGGTCTGGCAGGACAGACGTGTACCTT  
hu.29-B 1770 AGTACCGCAGATGTCAACACACACAAAGCGTTCTTCCAGGCATGGTCTGGCAGGACAGACGTGTACCTT  
hu.63-B 1770 AGTACCTCAGATGTCAACACACAAAGCGTTCTTCCAGGCATGGTGTGGCAGGACAGACGTGTACCTG  
hu.56-B 1770 AGTACCTCAGATGTCAACACACAAAGCGTTCTTCCAGGCATGGTCTGGCAGGACAGACGTGTACCTG  
hu.45-B 1770 AGTACCGCAGATGTCAACACACAAAGCGTTCTTCCAGGCATGGTCTGGCAGGACAGACGTGTACCTT  
hu.57-B 1767 AGTACCTCAGATGTCAACACACAAAGCGTTCTTCCAGGCATGGTCTGGCAGGACAGACGTGTACCTT  
hu.35-B 1770 AGTACCGCAGATGTCAACACACAAAGCGTTCTTCCAGGCATGGTCTGGCAGGACAGACGTGTACCTT  
hu.58-B 1770 ATCTACTGCAGATGTCAACACACAAAGCGTTCTTCCAGGCATGGTCTGGCAGGACAGACGTGTACCTG  
hu.28-B 1770 AGTACCGCAGATGTCAACACACAAAGCGTTCTTCCAGGCATGGTCTGGCAGGACAGACGTGTACCTG  
hu.51-B 1770 AGTACCGCAGATGTCAACACACAAAGCGTTCTTCCAGGCATGGTCTGGCAGGACAGACGTGTACCTT  
hu.19-B 1770 AGTACCTCAGATGTCAACACACAAAGCGTTCTTCCAGGCATGGTCTGGCAGGACAGACGTGTACCTG  
hu.49-B 1770 AGTACTGCAGATGTCAACACACAAAGCGTTCTTCCAGGCATGGTCTGGCAGGACAGACGTGTACCTG  
hu.52-B 1770 AGTACCGCAGATGTCAACACACAAAGCGTTCTTCCAGGCATGGTCTGGCAGGACAGACGTGTACCTT  
hu.13-B 1770 AGTACCGCAGATGTCAACACACAAAGCGTTCTTCCAGGCATGGTCTGGCAGGACAGACGTGTACCTG  
AAV2-B 1770 AGTACCGCAGATGTCAACACACAAAGCGTTCTTCCAGGCATGGTCTGGCAGGACAGACGTGTACCTT  
hu.20-B 1770 AGTACCTCAGATGTCAACACACAAAGCGTTCTTCCAGGCATGGTCTGGCAGGACAGACGTGTACCTG  
hu.24-B 1770 AGTACCTCAGATGTCAACACACAAAGCGTTCTTCCAGGCATGGTCTGGCAGGACAGACGTGTACCTG  
hu.64-B 1770 AGTACCTCAGATGTCAACACACAAAGCGTTCTTCCAGGCATGGTCTGGCAGGACAGACGTGTACCTG  
hu.27-B 1770 AGTACCTCAGATGTCAACACACAAAGCGTTCTTCCAGGCATGGTCTGGCAGGACAGACGTGTACCTG  
hu.21-B 1770 AGTACCTCAGATGTCAACACACAAAGCGTTCTTCCAGGCATGGTCTGGCAGGACAGACGTGTACCTG

FIG. 3BU

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hu.22-B 1770 AGCTACCTCAGATGTCAACACACAAAGGCGTTCTTCCAGGCATGGTCTGGCAGGACAGAGACGTGTACCTG  
 hu.23-B 1770 AGCTACCTCAGATGTCAACACACAAAGGCGTTCTTCCAGGCATGGTCTGGCAGGACAGAGACGTGTACCTG  
 hu.7-C 1770 AACTACTGGAACGTCAATCACCAGGAGCGTTACCTGGCATGGTGTGGCAGGATCGAGACGTGTACCTG  
 hu.61-C 1770 AACTACTGGAACGTCAATCACCAGGAGCGTTACCTGGTATGGTGTGGCAGGATCGAGACGTGTACCTG  
 rh.56-C 1770 AACTACTGGAACGTCAATCACCAGGAGCGTTACCTGGCATGGTGTGGCAGGATCGAGACGTGTACCTG  
 hu.9-C 1770 AACTACAGAAATGTCAATCACCAGGAGCGTTACCTGGTATGGTGTGGCAGGATCGAGACGTGTACCTG  
 hu.54-C 1767 AAGTACTGAAACTGTGAATCACCAGGAGCATTACCTGGTATGGTGTGGCAGGATCGAGACGTGTACCTG  
 hu.53-C 1767 AAGTACTGAAACTGTGAATCACCAGGAGCATTACCTGGTATGGTGTGGCAGGATCGAGACGTGTACCTG  
 hu.60-C 1770 AACTACTGGAACGTCAATCACCAGGAGCGTTACCTGGTATGGTGTGGCAGGATCGAGACGTGTACCTG  
 hu.55-C 1767 AAGTACTGAAACTGTGAATCACCAGGAGCATTACCTGGTATGGTGTGGCAGGATCGAGACGTGTACCTG  
 hu.2-C 1770 AACTACTGGAACGTCAATCGCCAAAGGAGCGTTACCTGGTATGGTGTGGCAGGATCGAGACGTGTACCTG  
 hu.1-C 1770 AACTACTGGAACGTCAATCACCAGGAGCGTTACCTGGTATGGTGTGGCAGGATCGAGACGTGTACCTG  
 hu.18-C 1770 AACTACTGGAACGTCAATCACCAGGAGCGTTACCTGGTATGGTGTGGCAGGATCGAGACGTGTACCTG  
 hu.3-C 1773 AACTACAGGAACGTCAATCACCAGGAGCGTTACCTGGTATGGTGTGGCAGGATCGAGACGTGTACCTG  
 hu.25-C 1770 AACTACTGGAACGTCAATCACCAGGAGCGTTACCTGGTATGGTGTGGCAGGATCGAGACGTGTACCTG  
 hu.15-C 1770 AACTACTGGAACGTCAATCACCAGGAGCGTTACCTGGTATGGTGTGGCAGGATCGAGACGTGTACCTG  
 hu.16-C 1770 AACTACTGGAACGTCAATCACCAGGAGCGTTACCTGGTATGGTGTGGCAGGATCGAGACGTGTACCTG  
 hu.11-C 1770 AACTACAGAAATGTCAATCACCAGGAGCGTTACCTGGTATGGTGTGGCAGGATCGAGACGTGTACCTG  
 hu.10-C 1770 AACTACAGAAATGTCAATCACCAGGAGCGTTACCTGGTATGGTGTGGCAGGATCGAGACGTGTACCTG  
 hu.4-C 1770 AACTACTGGAACGTCAATCACCAGGAGCGTTACCTGGTATGGTGTGGCAGGATCGAGACGTGTACCTG  
 rh.54-D 1776 CCAGACACAAAGTTGTCAACAAACCAGGAGCGTTACCTGGCATGGTCTGGCAGAACCCGGACGTGTACCTG  
 rh.48-D 1776 CCAGACACAAAGTTGTCAACAAACCAGGAGCGTTACCTGGCATGGTCTGGCAGAACCCGGACGTGTACCTG  
 rh.55-D 1776 CCAGACACAAAGTTGTCAACAAACCAGGAGCGTTACCTGGTATGGTCTGGCAGAACCCGGACGTGTACCTG  
 rh.62-D 1776 CCAGACACAAAGTTGTCAACAAACCAGGAGCGTTACCTGGTATGGTCTGGCAGAACCCGGACGTGTACCTG  
 AAV7-D 1776 CCAGACACAAAGTTGTCAACAAACCAGGAGCGTTACCTGGTATGGTCTGGCAGAACCCGGACGTGTACCTG  
 rh.52-E 1779 TATTGTGGGGCCCGTCAACAGCCAGGAGCGTTACCTGGCATGGTCTGGCAGAACCCGGACGTGTACTTG  
 rh.51-E 1779 TATTGTGGGGCCCGTCAACAGCCAGGAGCGTTACCTGGCATGGTCTGGCAGAACCCGGACGTGTACTTG  
 hu.39-E 1779 TACTGTGGGGCCCGTCAACAGCCAGGAGCGTTACCTGGCATGGTCTGGCAGAACCCGGACGTGTACTTG  
 rh.53-E 1779 TATTGTGGGGCCCGTCAACAGCCAGGAGCGTTACCTGGCATGGTCTGGCAGAACCCGGACGTGTACTTG  
 hu.37-E 1779 TATTGTGGGAAATGTCAACAGCCAAAGGAGCGTTACCTGGCATGGTCTGGCAGAACCCGGACGTGTACTTG

FIG. 3BV

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rh. 43-E	1773	TCAAATTTGGAACGTCAACAGCCAGGGGGCCTTACCCGGTATGGTCTGGCAGAAACCGGGACGTGTACCTG	1900	1910	1920	1930	1940	1950	1960	
rh. 50-E	1779	TATTGTGGGGCCGTCAACAGCCAGGGAGCCCTTACCTGGCATGGTCTGGCAGAAACCGGGACGTGTACCTG	.... .... .... .... .... .... .... .... .... ....							
rh. 49-E	1779	TATTGTGGGGCCGTCAACAGCCAGGGAGCCCTTACCTGGCATGGTCTGGCAGAAACCGGGACGTGTACCTG	1810	CAAGGACCCATCTGGGCCAAGATCCCAGAGACGGGGGCGCACTTTCACCCCTCTCCGGCCATGGGCGGAT	1843	CAAGGACCTATCTGGGGCAAGATTCTTCACACGGATGGACACTTTCATCCTCTCCTCTCTGATGGAGGCT	1837	CAGGGTCCCATTTGGGCCAAGATTCTTCATACCGATGGACACTTTCACCCCTCACCCGCTGATGGTGGGT	1843	CAGGGTCCCATTTGGGGCCAAAATTCCTCACACAGATGGACACTTTCACCCGCTCTCCTCTTATGGGCGGCT
rh. 61-E	1779	TATTGTGGGGCCGTCAACAGCCAGGGAGCCCTTACCTGGCATGGTCTGGCAGAAACCGGGACGTGTACCTG	1843	CAGGGTCCCATTTGGGGCCAAAATTCCTCACACAGATGGACACTTTCACCCGCTCTCCTCTTATGGGCGGCT	hu. 46-A	1843	CAGGGTCCCATTTGGGGCCAAAATTCCTCACACAGATGGACACTTTCACCCGCTCTCCTCTTATGGGCGGCT	hu. 48-A	1843	CAGGGTCCCATTTGGGGCCAAAATTCCTCACACAGATGGACACTTTCACCCGCTCTCCTCTTATGGGCGGCT
hu. 41-E	1779	TATTGTGGGAAATGTCAACAGCCCAAGGAGCCCTTACCTGGCATGGTCTGGCAGAAACCGAGACGTGTACCTG	1843	CAGGGTCCCATTTGGGGCCAAAATTCCTCACACAGATGGACACTTTCACCCGCTCTCCTCTTATGGGCGGCT	hu. 44-A	1843	CAGGGTCCCATTTGGGGCCAAAATTCCTCACACAGATGGACACTTTCACCCGCTCTCCTCTTATGGGCGGCT			
rh. 64-E	1779	TATTGTGGGGCCGTCAACAGCCAGGGAGCCCTTACCTGGCATGGTCTGGCAGAAACCGGGACGTGTACCTG								
hu. 42-E	1779	TATTGTGGGAAATGTCAACAGCCCAAGGAGCCCTTACCTGGCATGGTCTGGCAGAAACCGAGACGTGTACCTG								
rh. 57-E	1779	TATTGTGGGGCCGTCAACAGCCAGGGAGCCCTTACCTGGCATGGTCTGGCAGAAACCGGGACGTGTACCTG								
hu. 40-E	1779	TATTGTGGGAAATGTCAACAGCCCAAGGAGCCCTTACCTGGCATGGTCTGGCAGAAACCGAGACGTGTACCTG								
AAV8-E	1779	TCAAATTTGGAACGTCAACAGCCAGGGGGCCTTACCCGGTATGGTCTGGCAGAAACCGGGACGTGTACCTG								
rh. 58-E	1779	TATTGTGGGGCCGTCAACAGCCAGGGAGCCCTTACCTGGCATGGTCTGGCAGAAACCGGGACGTGTACCTG								
rh. 40-E	1779	TATTGTGGGAAATGTCAACAGCCCAAGGAGCCCTTACCTGGCATGGTCTGGCAGAAACCGGGACGTGTACCTG								
hu. 67-E	1779	TATTGTGGGAAATGTCAACAGCCCAAGGAGCCCTTACCTGGCATGGTCTGGCAGAAACCGAGACGTGTACCTG								
hu. 17-E	1779	TATTGTAGGGCCGTCAACAGTCAAGGAGCCCTTACCTGGCATGGTCTGGCAGAAACCGGGACGTGTACCTG								
hu. 6-E	1779	TATTGTAGGGCCGTCAACAGTCAAGGAGCCCTTACCTGGCATGGTCTGGCAGAAACCGGGACGTGTACCTG								
hu. 66-E	1779	TATTGTGGGAAATGTCAACAGCCCAAGGAGCCCTTACCTGGCATGGTCTGGCAGAAACCGAGACGTGTACCTG								
rh. 38-E	1779	TATTGTGGGAAATGTCAACAGCCCAAGGAGCCCTTACCTGGCATGGTCTGGCAGAAACCGAGACGTGTACCTG								
hu. 32-F	1773	GCAGACCGGCTGGGTTCAAAACCAAGGAATACTTCCGGGTATGGTTTGGCAGGACAGAGATGTGTACCTG								
AAV9/hu	1773	GCAGACCGGCTGGGTTCAAAACCAAGGAATACTTCCGGGTATGGTTTGGCAGGACAGAGATGTGTACCTG								
hu. 31-F	1773	GCAGACCGGCTGGGTTCAAAACCAAGGAATACTTCCGGGTATGGTTTGGCAGGACAGAGATGTGTACCTG								
AAV5	1810	CAAGGACCCATCTGGGCCAAGATCCCAGAGACGGGGGCGCACTTTCACCCCTCTCCGGCCATGGGCGGAT								
AAV3-3	1843	CAAGGACCTATCTGGGGCAAGATTCTTCACACGGATGGACACTTTCATCCTCTCCTCTGATGGAGGCT								
AAV4-4	1837	CAGGGTCCCATTTGGGCCAAGATTCTTCATACCGATGGACACTTTCACCCCTCACCCGCTGATGGTGGGT								
AAV1-A	1843	CAGGGTCCCATTTGGGGCCAAAATTCCTCACACAGATGGACACTTTCACCCGCTCTCCTCTTATGGGCGGCT								
hu. 46-A	1843	CAGGGTCCCATTTGGGGCCAAAATTCCTCACACAGATGGACACTTTCACCCGCTCTCCTCTTATGGGCGGCT								
hu. 48-A	1843	CAGGGTCCCATTTGGGGCCAAAATTCCTCACACAGATGGACACTTTCACCCGCTCTCCTCTTATGGGCGGCT								
hu. 44-A	1843	CAGGGTCCCATTTGGGGCCAAAATTCCTCACACAGATGGACACTTTCACCCGCTCTCCTCTTATGGGCGGCT								

FIG. 3BW

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hu.43-A 1846 CAGGGTCCCATTGGGCCAAAATTCCTCACACAGATGGACACTTTCACCCGCTCTCCTCTTATGGGCGGCT  
 AAV6-A 1843 CAGGTCCCTATTGGGCCAAAATTCCTCACACGGATGGACACTTTCACCCGCTCTCCTCTCATGGGCGGCT  
 hu.34-B 1840 CAGGGGCCCATCTGGGCAAGATTCACACACGACGACGACATTTTCACCCCTCTCCCCCTCATGGGTGGAT  
 hu.47-B 1840 CAGGGGCCCATCTGGGCAAGATTCACACACGACGACGACATTTTCACCCCTCTCCCCCTCATGGGTGGAT  
 hu.29-B 1840 CAGGGGCCCATTTGGGCAAGATTCACACACGACGACGACATTTTCACCCCTCTCCCCCTCATGGGCGGAT  
 hu.63-B 1840 CAGGGGCCCATCTGGGCAAGATTCACACACGACGACGACATTTTCACCCCTCTCCCCCTCATGGGCGGAT  
 hu.56-B 1840 CAGGGGCCCATCTGGGCAAGATTCACACACGACGACGACATTTTCACCCCTCTCCCCCTCATGGGCGGAT  
 hu.45-B 1840 CAGGGGCCCATCTGGGCAAGATTCACACACGACGACGACATTTTCACCCCTCTCCCCCTCATGGGCGGAT  
 hu.57-B 1837 CAGGGGCCCATCTGGGCAAGATTCACACACGACGACGACATTTTCACCCCTCTCCCCCTCATGGGTGGAT  
 hu.35-B 1840 CAGGGGCCCATCTGGGCAAGATTCACACACGACGACGACATTTTCACCCCTCTCCCCCTCATGGGCGGAT  
 hu.58-B 1840 CAGGGGCCCATCTGGGCAAGATTCACACACGACGACGACATTTTCACCCCTCTCCCCCTCATGGGTGGAT  
 hu.28-B 1840 CAGGGGCCCATCTGGGCAAGATTCACACACGACGACGACATTTTCACCCCTCTCCCCCTCATGGGCGGAT  
 hu.51-B 1840 CAGGGGCCCATCTGGGCAAGATTCACACACGACGACGACATTTTCACCCCTCTCCCCCTCATGGGCGGAT  
 hu.19-B 1840 CAGGGGCCCATCTGGGCAAGATTCACACACGACGACGACATTTTCACCCCTCTCCCCCTCATGGGTGGAT  
 hu.49-B 1840 CAGGGGCCCATCTGGGCAAGATTCACACACGACGACGACATTTTCACCCCTCTCCCCCTCATGGGCGGAT  
 hu.52-B 1840 CAGGGGCCCATCTGGGCAAGATTCACACACGACGACGACATTTTCACCCCTCTCCCCCTCATGGGCGGAT  
 hu.13-B 1840 CAGGGGCCCATCTGGGCAAGATTCACACACGACGACGACATTTTCACCCCTCTCCCCCTCATGGGCGGAT  
 AAV2-B 1840 CAGGGGCCCATCTGGGCAAGATTCACACACGACGACGACATTTTCACCCCTCTCCCCCTCATGGGTGGAT  
 hu.20-B 1840 CAGGGGCCCATCTGGGCAAGATTCACACACGACGACGACATTTTCACCCCTCTCCCCCTCATGGGCGGAT  
 hu.24-B 1840 CAGGGGCCCATCTGGGCAAGATTCACACACGACGACGACATTTTCACCCCTCTCCCCCTCATGGGCGGAT  
 hu.64-B 1840 CAGGGGCCCATCTGGGCAAGATTCACACACGACGACGACATTTTCACCCCTCTCCCCCTCATGGGCGGAT  
 hu.27-B 1840 CAGGGGCCCATCTGGGCAAGATTCACACACGACGACGACATTTTCACCCCTCTCCCCCTCATGGGCGGAT  
 hu.21-B 1840 CAGGGGCCCATCTGGGCAAGATTCACACACGACGACGACATTTTCACCCCTCTCCCCCTCATGGGCGGAT  
 hu.22-B 1840 CAGGGGCCCATCTGGGCAAGATTCACACACGACGACGACATTTTCACCCCTCTCCCCCTCATGGGCGGAT  
 hu.23-B 1840 CAGGGGCCCATCTGGGCAAGATTCACACACGACGACGACATTTTCACCCCTCTCCCCCTCATGGGCGGAT  
 hu.7-C 1840 CAGGACCCCATTTGGGCCAAGATTCCTCACACCGATGGACACTTTCATCCTTCTCCACTGATGGAGGTT  
 hu.61-C 1840 CAGGACCCCATTTGGGCCAAGATTCCTCACACCGATGGACACTTTCATCCTTCTCCACTGATGGAGGTT  
 rh.56-C 1840 CAGGACCCCATTTGGGCCAAGATTCCTCACACCGATGGACACTTTCATCCTTCTCCACTGATGGAGGTT  
 hu.9-C 1840 CAGGACCCCATTTGGGCCAAGATTCCTCACACCGATGGACACTTTCACCCCTTCTCCACTGATGGAGGTT  
 hu.54-C 1837 CAGGACCCCATTTGGGCCAAGATTCCTCACGCGGATGGACACTTTCATCCTTCTCCACTGATGGAGGTT

FIG. 3BX

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hu. 53-C	1837	CAGGACCCATTGGGCCAAGATTCC	CACACCCGATGGACACTTTCATCCTTCTCCACTGATGGGAGGTT
hu. 60-C	1840	CAGGACCCATTGGGCCAAGATTCC	CACACCCGATGGACACTTTCATCCTTCTCCACTGATGGGAGGTT
hu. 55-C	1837	CAGGACCCATTGGGCCAAGATTCC	CACACCCGATGGACACTTTCATCCTTCTCCACTGATGGGAGGTT
hu. 2-C	1840	CAGGACCCATTGGGCCAAGATTCC	CACACCCGATGGACACTTTCATCCTTCTCCACTGATGGGAGGTT
hu. 1-C	1840	CAGGACCCATTGGGCCAAGATTCC	CACACCCGATGGACACTTTCATCCTTCTCCACTGACGGGAGGTT
hu. 18-C	1840	CAGGACCCATTGGGCCAAGATTCC	CACACCCGATGGACACTTTCATCCTTCTCCACTGATGGGAGGTT
hu. 3-C	1843	CAGGACCCATTGGGCCAAGATTCC	CACACCCGATGGACACTTTCATCCTTCTCCACTGATGGGAGGTT
hu. 25-C	1840	CAGGACCCATTGGGCCAAGATTCC	CACACCCGATGGACACTTTCATCCTTCTCCACTGATGGGAGGTT
hu. 15-C	1840	CAGGACCCATTGGGCCAAGATTCC	CACACCCGATGGACACTTTCATCCTTCTCCACTGATGGGAGGTT
hu. 16-C	1840	CAGGACCCATTGGGCCAAGATTCC	CACACCCGATGGACACTTTCATCCTTCTCCACTGATGGGAGGTT
hu. 11-C	1840	CAGGACCCATTGGGCCAAGATTCC	CACACCCGATGGACACTTTCATCCTTCTCCACTGATGGGAGGTT
hu. 10-C	1840	CAGGACCCATTGGGCCAAGATTCC	CACACCCGATGGACACTTTCATCCTTCTCCACTGATGGGAGGTT
hu. 4-C	1840	CAGGACCCATTGGGCCAAGATTCC	CACACCCGATGGACACTTTCATCCTTCTCCACTGATGGGAGGTT
rh. 54-D	1846	CAGGTCCCATCTGGGCCAAGATTCC	CACACGACGGCAACTTTCACCCGTCCTCCGCTGATGGGCGGCT
rh. 48-D	1846	CAGGTCCCATCTGGGCCAAGATTCC	CACACGACGGCAACTTTCACCCGTCCTCCGCTGATGGGCGGCT
rh. 55-D	1846	CAGGTCCCATCTGGGCCAAGATTCC	CACACGACGGCAACTTTCACCCGTCCTCCGCTGATGGGCGGCT
rh. 62-D	1846	CAGGTCCCATCTGGGCCAAGATTCC	CACACGACGGCAACTTTCACCCGTCCTCCGCTGATGGGCGGCT
AAV7-D	1846	CAGGTCCCATCTGGGCCAAGATTCC	CACACGACGGCAACTTTCACCCGTCCTCCGCTGATGGGCGGCT
rh. 52-E	1849	CAGGTCCCATCTGGGCCAAGATTCC	CACACGACGGCAACTTTCACCCGTCCTCCGCTGATGGGCGGCT
rh. 51-E	1849	CAGGTCCCATCTGGGCCAAGATTCC	CACACGACGGCAACTTTCACCCGTCCTCCGCTGATGGGCGGCT
hu. 39-E	1849	CAGGTCCCATCTGGGCCAAGATTCC	CACACGACGGCAACTTTCACCCGTCCTCCGCTGATGGGCGGCT
rh. 53-E	1849	CAGGTCCCATCTGGGCCAAGATTCC	CACACGACGGCAACTTTCACCCGTCCTCCGCTGATGGGCGGCT
hu. 37-E	1849	CAGGTCCCATCTGGGCCAAGATTCC	CACACGACGGCAACTTTCACCCGTCCTCCGCTGATGGGCGGCT
rh. 43-E	1843	CAGGTCCCATCTGGGCCAAGATTCC	CACACGACGGCAACTTTCACCCGTCCTCCGCTGATGGGCGGCT
rh. 50-E	1849	CAGGTCCCATCTGGGCCAAGATTCC	CACACGACGGCAACTTTCACCCGTCCTCCGCTGATGGGCGGCT
rh. 49-E	1849	CAGGTCCCATCTGGGCCAAGATTCC	CACACGACGGCAACTTTCACCCGTCCTCCGCTGATGGGCGGCT
rh. 61-E	1849	CAGGTCCCATCTGGGCCAAGATTCC	CACACGACGGCAACTTTCACCCGTCCTCCGCTGATGGGCGGCT
hu. 41-E	1849	CAGGTCCCATCTGGGCCAAGATTCC	CACACGACGGCAACTTTCACCCGTCCTCCGCTGATGGGCGGCT
rh. 64-E	1849	CAGGTCCCATCTGGGCCAAGATTCC	CACACGACGGCAACTTTCACCCGTCCTCCGCTGATGGGCGGCT
hu. 42-E	1849	CAGGTCCCATCTGGGCCAAGATTCC	CACACGACGGCAACTTTCACCCGTCCTCCGCTGATGGGCGGCT

FIG. 3BY

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rh. 57-E	1849	CAGGGTCCCTATTGGGCCAAGATTCCCTCACACAGATGGCAACTTTCACCCGTCTCCTTTAATGGGCGGCT	1970	1980	1990	2000	2010	2020	2030
hu. 40-E	1849	CAGGGTCCCATCTGGGCCAAGATTCCCTCACACGACGGCAACTTCCACCCCTTCACCCGCTAATGGGAGGAT	..... ..... ..... ..... ..... ..... ..... ..... ..... .....						
AAV8-E	1849	CAGGGTCCCATCTGGGCCAAGATTCCCTCACACGACGGCAACTTCCACCCGCTCCTCCGCTGATGGGCGGCT	1880						
rh. 58-E	1849	CAGGGTCCCTATTGGGCCAAGATTCCCTCACACAGATGGCAACTTTCACCCGCTCCTCCTTAATGGGCGGCT	1913						
rh. 40-E	1849	CAGGGTCCCATCTGGGCCAAGATTCCCTCACACGACGGCAACTTTCACCCGCTCCTCCTGATGGGCGGCT	1907						
hu. 67-E	1849	CAGGGTCCCATCTGGGCCAAGATTCCCTCACACGACGGCAACTTTCACCCCTTCACCCGCTAATGGGAGGAT	1913						
hu. 17-E	1849	CAGGGTCCCTATCTGGGCCAAGATTCCCTCACACGACGGCAACTTTCATCCTTCGCCGCTGATGGGAGGCT	1913						
hu. 6-E	1849	CAGGGTCCCTATCTGGGCCAAGATTCCCTCACACGACGGCAACTTTCATCCTTCGCCGCTGATGGGAGGCT	1913						
hu. 66-E	1849	CAGGGTCCCATCTGGGCCAAGATTCCCTCACACGACGGCAACTTTCACCCCTTCACCCGCTAATGGGAGGAT	1843						
rh. 38-E	1849	CAGGGTCCCATCTGGGCCAAGATTCCCTCACACGACGGCAACTTTCACCCCTTCACCCGCTAATGGGAGGAT	1843						
hu. 32-F	1843	CAAGGACCCCATTTGGGCCAAAATTCCCTCACACGACGGCAACTTTCACCCCTTCACCCGCTAATGGGAGGAT	1843						
AAV9/hu	1843	CAAGGACCCCATTTGGGCCAAAATTCCCTCACACGACGGCAACTTTCACCCCTTCACCCGCTGATGGGAGGAT							
hu. 31-F	1843	CAAGGACCCCATTTGGGCCAAAATTCCCTCACACGACGGCAACTTTCACCCCTTCACCCGCTAATGGGAGGAT							
AAV5	1880	TCGGACTCAAACACCCACCGCCCATGATGCTCATCAAGAACACGCGCTGTGCCCGGAAAT--ATCACCCAG							
AAV3-3	1913	TTGGACTGAAACATCCGCCCTCCTCAAAATCATGATCAAAAATACCTCCGGTACCGGCAAAATCCTCCGACGAC							
AAV4-4	1907	TTGGGCTGAAACACCCGCCCTCCTCAAAATTTTATCAAGAACACCCCGGTACCTGCGAATCCTGCAACGAC							
AAV1-A	1913	TTGGACTCAAGAACCCCGCTCCTCAGATCCTCATCAAAAACACGCGCTGTTCCTGCGAATCCTCCGGCGGA							
hu. 46-A	1913	TTGGACTCAAGAACCCCGCTCCTCAGATCCTCATCAAAAACACGCGCTGTTCCTGCGAATCCTCCGGCGGA							
hu. 48-A	1913	TTGGACTCAAGAACCCCGCTCCTCAGATCCTCATCAAAAACACGCGCTGTTCCTGCGAATCCTCCGGCGGA							
hu. 44-A	1913	TTGGACTCAAGAACCCCGCTCCTCAGATCCTCATCAAAAACACGCGCTGTTCCTGCGAATCCTCCGGCGGA							
hu. 43-A	1916	TTGGACTCAAGAACCCCGCTCCTCAGATCCTCATCAAAAACACGCGCTGTTCCTGCGAATCCTCCGGCGGA							
AAV6-A	1913	TTGGACTTAAGCACCCCGCTCCTCAGATCCTCATCAAAAACACGCGCTGTTCCTGCGAATCCTCCGGCGGA							
hu. 34-B	1910	TCGGACTTAAACACCCCTCCTCCACAGATTCTCATCAAGAACACCCCGGTACCTGCGAATCCTCCGGCAGA							
hu. 47-B	1910	TCGGACTTAAACACCCCTCCTCCACAGATTCTCATCAAGAACACCCCGGTACCTGCGAATCCTTCGACCCAC							
hu. 29-B	1910	TTGGACTTAAACACCCCTCCTCCACAGATTCTCATCAAGAACACCCCGGTACCTGCGAATCCTTCGACCCAC							
hu. 63-B	1910	TCGGACTTAAACACCCCTCCCGGAGATTCTCATCAAGAACACCCCGGTACCTGCGAATCCTTCGACTAC							
hu. 56-B	1910	TTGGACTTAAACACCCCTCCTCCACAGATTCTCATTAAGAAATACCCCGGTACCTGCGAATCCTTCGACCCAC							

FIG. 3BZ



hu.45-B 1910 TCGGACTTAAACACCCCTCCTCCACAGATTCTCATCAAGAACACCCCGGTACCTGCGAATCCTTCGACCAC  
 hu.57-B 1907 TTGGACTTAAACACCCCTCCTCCACAGATTCTCATTAAGAATACCCCGGTACCTGCGAATCCTTCGACCAC  
 hu.35-B 1910 TCGGACTTAAACACCCCTCCTCCACAGATTCTCATCAAGAACACCCCGGTACCTGCGAATCCTTCGACCAC  
 hu.58-B 1910 TCGGACTTAAACACCCCTCCTCCACAGATTCTCATCAAAAACACCCCGGTACCTGCGAATCCTTCGACCAC  
 hu.28-B 1910 TTGGACTTAAACACCCCTCCTCCACAGATTCTCATCAAGAACACCCCGGTACCTGCGAATCCTTCGACCAC  
 hu.51-B 1910 TCGGACTTAAACACCCCTCCTCCACAGATTCTCATCAAGAACACCCCGGTACCTGCGAATCCTTCGACCAC  
 hu.19-B 1910 TCGGACTTAAACACCCCTCCTCCACAAATTCTCATCAAGAACACCCCGGTACCTGCGAATCCTTCGACCAC  
 hu.49-B 1910 TTGGACTTAAACACCCCTCCTCCACAGATTCTCATCAAGAACACCCCGGTACCTGCGAATCCTTCGACCAC  
 hu.52-B 1910 TCGGACTTAAACACCCCTCCTCCACAGATTCTCATCAAGAACACCCCGGTACCTGCGAATCCTTCGACCAC  
 hu.13-B 1910 TCGGACTTAAACACCCCTCCTCCACAGATTCTCATCAAGAACACCCCGGTACCTGCGAATCCTTCGACCAC  
 AAV2-B 1910 TCGGACTTAAACACCCCTCCTCCACAGATTCTCATCAAGAACACCCCGGTACCTGCGAATCCTTCGACCAC  
 hu.20-B 1910 TCGGACTTAAACACCCCTCCTCCACAAATTCTCATCAAGAACACCCCGGTACCTGCGAATCCTTCGACCAC  
 hu.24-B 1910 TCGGACTTAAACACCCCTCCTCCACAAATTCTCATCAAGAACACCCCGGTACCTGCGAATCCTTCGACCAC  
 hu.64-B 1910 TCGGACTTAAACACCCCTCCTCCCGCAGATTCTCATCAAGAACACCCCGGTACCTGCGAATCCTTCGACTAC  
 hu.27-B 1910 TCGGACTTAAACACCCCTCCTCCACAAATTCTCATCAAGAACACCCCGGTACCTGCGAATCCTTCGACCAC  
 hu.21-B 1910 TCGGACTTAAACACCCCTCCTCCACAAATTCTCATCAAGAACACCCCGGTACCTGCGAATCCTTCGACCAC  
 hu.22-B 1910 TCGGACTTAAACACCCCTCCTCCACAAATTCTCATCAAGAACACCCCGGTACCTGCGAATCCTTCGACCAC  
 hu.23-B 1910 TTGGACTTAAACACCCCTCCTCCACAAATTCTCATCAAGAACACCCCGGTACCTGCGAATCCTTCGACCAC  
 hu.7-C 1910 TTGGGCTCAAACACCCCGCTCCTCAGATCATGATCAAAAACACTCCCGTCCAGCCAATCCTCCACAAA  
 hu.61-C 1910 TTGGACTCAAACACCCACCTCCTCAATCATGATCAAAAACACTCCCGTCCAGCCAATCCTCCACAAA  
 rh.56-C 1910 TTGGGCTCAAACACCCCGCTCCTCAGATCATGATCAAAAACACTCCCGTCCAGCCAATCCTCCACAAA  
 hu.9-C 1910 TTGGACTCAAACACCCCGCTCCTCAATCATGATCAAAAACACTCCCGTCCAGCCAATCCTCCACAAA  
 hu.54-C 1907 TTGGACTCAAACACCCCGCTCCTCAGATTATGATCAAAAACACTCCCGTCCAGCCAATCCTCCACAAA  
 hu.53-C 1907 TTGGACTCAAACACCCCGCTCCTCAGATTATGATCAAAAACACTCCCGTCCAGCCAATCCTCCACAAA  
 hu.60-C 1910 TTGGACTCAAACACCCACCTCCTCAATCATGATCAAAAACACTCCCGTCCAGCCAATCCTCCACAAA  
 hu.55-C 1907 TTGGACTCAAACACCCCGCTCCTCAGATTATGATCAAAAACACTCCCGTCCAGCCAATCCTCCACAAA  
 hu.2-C 1910 TTGGACTCAAACACCCCGCTCCTCAGATCATGATCAAAAACACTCCCGTCCAGCCAATCCTCCACAAA  
 hu.1-C 1910 TTGGACTCAAACACCCCGCTCCTCAGATCATGATCAAAAACACTCCCGTCCAGCCAATCCTCCACAAA  
 hu.18-C 1910 TTGGGCTCAAACACCCCGCTCCTCAGATCATGATCAAAAACACTCCCGTCCAGCCAATCCTCCTACAAA  
 hu.3-C 1913 TTGGACTCAAACACCCCGCTCCTCAGATCATGATCAAAAAGCACTCCCGTCCAGCCAATCCTCCACAAA

FIG. 3CA

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hu.25-C	1910	TTGGACTCAAAACACCCGCTCCTCAGATTATGATCAAAAAACACTCCCGTTCCAGCCAAATCCTCCTACAAA
hu.15-C	1910	TTGGACTCAAAACACCCACCTCCTCAGATCATGATTAATAAACACTCCCGTTCCAGCCAAATCCTCCTCACA
hu.16-C	1910	TTGGACTCAAAACACCCACCTCCTCAGATCATGATTAATAAACACTCCCGTTCCAGCCAAATCCTCCTCACA
hu.11-C	1910	TTGGACTCAAAACACCCGCTCCTCAAATCATGATCAAAAAACACTCCCGTTCCAGCCAAATCCTCCTCACA
hu.10-C	1910	TTGGACTCAAAACACCCGCTCCTCAAATCATGATCAAAAAACACTCCCGTTCCAGCCAAATCCTCCTCACA
hu.4-C	1910	TTGGACTCAAAACACCCGCTCCTCAGATCATGATCAAAAAACACTCCCGTTCCAGCCAAATCCTCCTCACA
rh.54-D	1916	TTGGACTGAAGCATCCGCTCCTCAGATCATGATCAAAAAACACTCCCGTTCCAGCCAAATCCTCCTCACA
rh.48-D	1916	TTGGACTGAAGCATCCGCTCCTCAGATCATGATCAAAAAACACTCCCGTTCCAGCCAAATCCTCCTCACA
rh.55-D	1916	TTGGACTGAAGCATCCGCTCCTCAGATCATGATCAAAAAACACTCCCGTTCCAGCCAAATCCTCCTCACA
rh.62-D	1916	TTGGACTGAAGCATCCGCTCCTCAGATCATGATCAAAAAACACTCCCGTTCCAGCCAAATCCTCCTCACA
AAV7-D	1916	TTGGACTTAAACATCCGCTCCTCAGATCATGATCAAAAAACACTCCCGTTCCAGCCAAATCCTCCTCACA
rh.52-E	1919	TTGGACTTAAACATCCGCTCCTCAGATCATGATCAAAAAACACTCCCGTTCCAGCCAAATCCTCCTCACA
rh.51-E	1919	TTGGACTTAAACATCCGCTCCTCAGATCATGATCAAAAAACACTCCCGTTCCAGCCAAATCCTCCTCACA
hu.39-E	1919	TTGGACTTAAACATCCGCTCCTCAGATCATGATCAAAAAACACTCCCGTTCCAGCCAAATCCTCCTCACA
rh.53-E	1919	TTGGACTTAAACATCCGCTCCTCAGATCATGATCAAAAAACACTCCCGTTCCAGCCAAATCCTCCTCACA
hu.37-E	1919	TTGGACTGAAGCACCACCTCCTCAGATCATGATCAAAAAACACTCCCGTTCCAGCCAAATCCTCCTCACA
rh.43-E	1913	TTGGCTGAAACATCCTCCGCTCCTCAGATCATGATCAAAAAACACTCCCGTTCCAGCCAAATCCTCCTCACA
rh.50-E	1919	TTGGACTTAAACATCCGCTCCTCAGATCATGATCAAAAAACACTCCCGTTCCAGCCAAATCCTCCTCACA
rh.49-E	1919	TTGGACTTAAACATCCGCTCCTCAGATCATGATCAAAAAACACTCCCGTTCCAGCCAAATCCTCCTCACA
rh.61-E	1919	TTGGACTTAAACATCCGCTCCTCAGATCATGATCAAAAAACACTCCCGTTCCAGCCAAATCCTCCTCACA
hu.41-E	1919	TTGGACTGAAGCACCACCTCCTCAGATCATGATCAAAAAACACTCCCGTTCCAGCCAAATCCTCCTCACA
rh.64-E	1919	TTGGACTTAAACATCCGCTCCTCAGATCATGATCAAAAAACACTCCCGTTCCAGCCAAATCCTCCTCACA
hu.42-E	1919	TTGGACTGAAGCACCACCTCCTCAGATCATGATCAAAAAACACTCCCGTTCCAGCCAAATCCTCCTCACA
rh.57-E	1919	TTGGACTTAAACATCCGCTCCTCAGATCATGATCAAAAAACACTCCCGTTCCAGCCAAATCCTCCTCACA
hu.40-E	1919	TTGGACTGAAGCACCACCTCCTCAGATCATGATCAAAAAACACTCCCGTTCCAGCCAAATCCTCCTCACA
AAV8-E	1919	TTGGCTGAAACATCCTCCGCTCCTCAGATCATGATCAAAAAACACTCCCGTTCCAGCCAAATCCTCCTCACA
rh.58-E	1919	TTGGACTTAAACATCCGCTCCTCAGATCATGATCAAAAAACACTCCCGTTCCAGCCAAATCCTCCTCACA
rh.40-E	1919	TTGGACTGAAGCACCACCTCCTCAGATCATGATCAAAAAACACTCCCGTTCCAGCCAAATCCTCCTCACA
hu.67-E	1919	TTGGACTGAAGCACCACCTCCTCAGATCATGATCAAAAAACACTCCCGTTCCAGCCAAATCCTCCTCACA
hu.17-E	1919	TTGGACTGAAGCACCACCTCCTCAGATCATGATCAAAAAACACTCCCGTTCCAGCCAAATCCTCCTCACA

FIG. 3CB

hu.6-E	1919	TTGGACTGAAACACCCGCCCTCCTCAGATCCTGATTAAGAATACACCTGTTCCTCCGGGATCCTCCAACTAC	2040	2050	2060	2070	2080	2090	2100
hu.66-E	1919	TTGGACTGAAGCACCCACCTCCTCAGATCCTGATCAAGAACACGCCGTACCTGCGGATCCTCCAAACAAC							
rh.38-E	1919	TTGGACTGAAGCACCCACCTCCTCAGATCCTGATCAAGAACACGCCGTACCTGCGGATCCTCCAAACAAC							
hu.32-F	1913	TTGGAATGAAGCACCCGCCCTCCTCAGATCCTCATCAAAAACACACCTGTACCTGCGGATCCTCCAAACGGC							
AAV9/hu	1913	TTGGAATGAAGCACCCGCCCTCCTCAGATCCTCATCAAAAACACACCTGTACCTGCGGATCCTCCAAACGGC							
hu.31-F	1913	TTGGAATGAAGCACCCGCCCTCCTCAGATCCTCATCAAAAACACACCTGTACCTGCGGATCCTCCAAACGGC							
AAV5	1947	CTTCTCGGACGTGCCCGTCAGCAGCTTCATCACCCAGTACAGCACCGGGCAGGTCAACCGTGGAGATGGAG	..... ..... ..... ..... ..... ..... ..... ..... ..... .....						
AAV3-3	1983	TTTCAGCCCGCCAAAGTTTGCTTCATTTATCACTCAGTACTCCACTGGACAGGTCAAGCGTGGAATTGAG							
AAV4-4	1977	CTTCAGCTCTACTCCGGTAAACTCCTTCATTACTCAGTACAGCACTGGCCAGGTGTGCGTGCAGATTGAC							
AAV1-A	1983	GTTTTTCAGCTACAAAAGTTTGCTTCATTATCATCCCCAATACTCCAGAGGACAAAGTGAAGTGTGGAATTGAA							
hu.46-A	1983	GTTTTTCAGCTACAAAAGTTTGCTTCATTATCATCCCCAATACTCCAGAGGACAAAGTGAAGTGTGGAATTGAA							
hu.48-A	1983	GTTTTTCAGCTACAAAAGTTTGCTTCATTATCATCCCCAATACTCCAGAGGACAAAGTGAAGTGTGGAATTGAA							
hu.44-A	1983	GTTTTTCAGCTACAAAAGTTTGCTTCATTATCATCCCCAATACTCCAGAGGACAAAGTGAAGTGTGGAATTGAA							
hu.43-A	1986	GTTTTTCAGCTACAAAAGTTTGCTTCATTATCATCCCCAATACTCCAGAGGACAAAGTGAAGTGTGGAATTGAA							
AAV6-A	1983	GTTTTTCGGCTACAAAAGTTTGCTTCATTATCATCCCCAGTATTCACACAGGACAAAGTGAAGTGTGGAATTGAA							
hu.34-B	1980	CTTCAGTGGGCAAAAGTTTGCTTCCTTCATCACACAGTACTCCACGGGACAGGTCAAGCGTGGAGATCGAG							
hu.47-B	1980	CTTCAGTGGGCAAAAGTTTGCTTCCTTCATCACACAGTACTCCACGGGACAGGTCAAGCGTGGAGATCGAG							
hu.29-B	1980	CTTCAGTGGGCAAAAGTTTGCTTCCTTCATTCACACAGTACTCCACGGGACAGGTCAAGCGTGGAGATCGAG							
hu.63-B	1980	CTTCAGTGGGCAAAAGTTTGCTTCCTTCATTCACACAGTACTCCACGGGACAGGTCAAGCGTGGAGATCGAG							
hu.56-B	1980	CTTCAGCGGGCAAAAGTTTGCTTCCTTCATCACACAGTATTCACCGGGCAGGTCAAGCGTGGAGATCGAG							
hu.45-B	1980	CTTCAGTGGGCAAAAGTTTGCTTCCTTCATCACACAGTATTCACCGGGCAGGTCAAGCGTGGAGATCGAG							
hu.57-B	1977	CTTCAGCGGGCAAAAGTTTGCTTCCTTCATCACACAGTATTCACCGGGCAGGTCAAGCGTGGAGATCGAG							
hu.35-B	1980	CTTCAGTGGGCAAAAGTTTGCTTCCTTCATCACACAGTATTCACCGGGCAGGTCAAGCGTGGAGATCGAG							
hu.58-B	1980	CTTCAGTGGGCAAAAGTTTGCTTCCTTCATCACACAGTATTCACCGGGCAGGTCAAGCGTGGAGATCGAG							
hu.28-B	1980	CTTCAGTGGGCAAAAGTTTGCTTCCTTCATCACACAGTATTCACCGGGCAGGTCAAGCGTGGAGATCGAG							
hu.51-B	1980	CTTCAGTGGGCAAAAGTTTGCTTCCTTCATCACACAGTATTCACCGGGCAGGTCAAGCGTGGAGATCGAG							
hu.19-B	1980	TTTCAGTGGGCAAAAGTTTGCTTCCTTCATCACACAGTATTCACCGGGCAGGTCAAGCGTGGAGATCGAG							

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hu. 49-B	1980	CTTCAGTGGGCAAAAGTTTGCTTCCTTCATCACACAGTATTCACAGGGCAGGTCAGCGTGGAGATCGAG
hu. 52-B	1980	CTTCAGTGGGCAAAAGTTTGCTTCCTTCATCACACAGTACTCCACGGGACAGGTCAGCGTGGAGATCGAG
hu. 13-B	1980	CTTCAGTGGGCAAAAGTTTGCTTCCTTCATCACACAGTATTCACGGGGCAGGTCAGCGTGGAGATCGAG
AAV2-B	1980	CTTCAGTGGGCAAAAGTTTGCTTCCTTCATCACACAGTACTCCACGGGACAGGTCAGCGTGGAGATCGAG
hu. 20-B	1980	TTTCAGTGGGCAAAAGTTTGCTTCCTTCATCACACAGTACTCCACGGGGCAGGTCAGCGTGGAGATCGAG
hu. 24-B	1980	TTTCAGTGGGCAAAAGTTTGCTTCCTTCATCACACAGTACTCCACGGGGCAGGTCAGCGTGGAGATCGAG
hu. 64-B	1980	CTTCAGTGGGCAAAAGTTTGCTTCCTTCATCACACAGTACTCCACGGGGCAGGTCAGCGTGGAGATCGAG
hu. 27-B	1980	TTTCAGTGGGCAAAAGTTTGCTTCCTTCATCACACAGTACTCCACGGGGCAGGTCAGCGTGGAGATCGAG
hu. 21-B	1980	TTTCAGTGGGCAAAAGTTTGCTTCCTTCATCACACAGTACTCCACGGGGCAGGTCAGCGTGGAGATCGAG
hu. 22-B	1980	TTTCAGTGGGCAAAAGTTTGCTTCCTTCATCACACAGTACTCCACGGGGCAGGTCAGCGTGGAGATCGAG
hu. 23-B	1980	TTTCAGTGGGCAAAAGTTTGCTTCCTTCATCACACAGTACTCCACGGGGCAGGTCAGCGTGGAGATCGAG
hu. 7-C	1980	CTTCAGTCTGCCAAAGTTTGCTTCCTTCATCACACAGTATTCACGGGGCAGGTCAGCGTGGAGATCGAG
hu. 61-C	1980	CTTCAGTCTGCCAAAGTTTGCTTCCTTCATCACACAGTATTCACGGGGCAGGTCAGCGTGGAGATCGAG
rh. 56-C	1980	CTTCAGTCTGCCAAAGTTTGCTTCCTTCATCACACAGTATTCACGGGGCAGGTCAGCGTGGAGATCGAG
hu. 9-C	1980	CTTCAGTCTGCCAAAGTTTGCTTCCTTCATCACACAGTATTCACGGGGCAGGTCAGCGTGGAGATCGAG
hu. 54-C	1977	CTTCAGTCTGCCAAAGTTTGCTTCCTTCATCACACAGTATTCACGGGGCAGGTCAGCGTGGAGATCGAG
hu. 53-C	1977	CTTCAGTCTGCCAAAGTTTGCTTCCTTCATCACACAGTATTCACGGGGCAGGTCAGCGTGGAGATCGAG
hu. 60-C	1980	CTTCAGTCTGCCAAAGTTTGCTTCCTTCATCACACAGTATTCACGGGGCAGGTCAGCGTGGAGATCGAG
hu. 55-C	1977	CTTCAGTCTGCCAAAGTTTGCTTCCTTCATCACACAGTATTCACGGGGCAGGTCAGCGTGGAGATCGAG
hu. 2-C	1980	CTTCAGTCTGCCAAAGTTTGCTTCCTTCATCACACAGTATTCACGGGGCAGGTCAGCGTGGAGATCGAG
hu. 1-C	1980	CTTCAGTCTGCCAAAGTTTGCTTCCTTCATCACACAGTATTCACGGGGCAGGTCAGCGTGGAGATCGAG
hu. 18-C	1980	CTTCAGTCTGCCAAAGTTTGCTTCCTTCATCACACAGTATTCACGGGGCAGGTCAGCGTGGAGATCGAG
hu. 3-C	1983	CTTCAGTCTGCCAAAGTTTGCTTCCTTCATCACACAGTATTCACGGGGCAGGTCAGCGTGGAGATCGAG
hu. 25-C	1980	CTTCAGTCTGCCAAAGTTTGCTTCCTTCATCACACAGTATTCACGGGGCAGGTCAGCGTGGAGATCGAG
hu. 15-C	1980	CTTCAGTCTGCCAAAGTTTGCTTCCTTCATCACACAGTATTCACGGGGCAGGTCAGCGTGGAGATCGAG
hu. 16-C	1980	CTTCAGTCTGCCAAAGTTTGCTTCCTTCATCACACAGTATTCACGGGGCAGGTCAGCGTGGAGATCGAG
hu. 11-C	1980	CTTCAGTCTGCCAAAGTTTGCTTCCTTCATCACACAGTATTCACGGGGCAGGTCAGCGTGGAGATCGAG
hu. 10-C	1980	CTACAGTCTGCCAAAGTTTGCTTCCTTCATCACACAGTATTCACGGGGCAGGTCAGCGTGGAGATCGAG
hu. 4-C	1980	CTTCAGTCTGCCAAAGTTTGCTTCCTTCATCACACAGTATTCACGGGGCAGGTCAGCGTGGAGATCGAG
rh. 54-D	1986	GTTTACGCCTGCCAAAGTTTGCTTCCTTCATCACACAGTACAGCACCAGGTCAGCGTGGAGATCGAG

FIG. 3C

rh. 48-D	1986	GTTACGCCCTGCCAAGTTTGCTTCTTTTCATCACACAGTACAGCACCGGCCAGGTCAGCGTGGAGATCGAG
rh. 55-D	1986	GTTACGCCCTGCCAAGTTTGCTTCTTTTCATCACACAGTACAGCACCGGCCAGGTCAGCGTGGAGATCGAG
rh. 62-D	1986	GTTACGCCCTGCCAAGTTTGCTTCTTTTCATCACACAGTACAGCACCGGCCAGGTCAGCGTGGAGATCGAG
AAV7-D	1986	GTTACTCCTGCCAAGTTTGCTTCTTTTCATCACACAGTACAGCACCGGCCAGGTCAGCGTGGAAATCGAG
rh. 52-E	1989	GTTCAACCAAGGCCAAGCTGAATTCCTTTCATCACGCGTACAGCACCGGCCAGGTCAGCGTGGAGATCGAG
rh. 51-E	1989	GTTCAACCAAGGCCAAGCTGAATTCCTTTCATCACGCGTACAGCACCGGCCAGGTCAGCGTGGAGATCGAG
hu. 39-E	1989	GTTCAACCAAGGCCAAGCTGAATTCCTTTCATCGCGCAGTACAGCACCGGCCAGGTCAGCGTGGAGATCGAG
rh. 53-E	1989	GTTCAACCAAGGCCAAGCTGAATTCCTTTCATCACGCGTACAGCACCGGCCAGGTCAGCGTGGAGATCGAG
hu. 37-E	1989	GTTCAACCAAGGCCAAGCTGAATTCCTTTCATCACGCGTACAGCACCGGCCAGGTCAGCGTGGAGATCGAG
rh. 43-E	1983	CTTCAACCAAGTCAAAGCTGAATTCCTTTCATCACGCAATACAGCACCGGCCAGGTCAGCGTGGAAATTGAA
rh. 50-E	1989	GTTCAACCAAGGCCAAGCTGAATTCCTTTCATCACGCGTACAGCACCGGCCAGGTCAGCGTGGAGATCGAG
rh. 49-E	1989	GTTCAACCAAGGCCAAGCTGAATTCCTTTCATCACGCGTACAGCACCGGCCAGGTCAGCGTGGAGATCGAG
rh. 61-E	1989	GTTCAACCAAGGCCAAGCTGAATTCCTTTCATCACGCGTACAGCACCGGCCAGGTCAGCGTGGAGATCGAG
hu. 41-E	1989	GTTCAACCAAGGCCAAGCTGAATTCCTTTCATCACGCGTACAGCACCGGCCAGGTCAGCGTGGAGATCGAG
rh. 64-E	1989	GTTCAACCAAGGCCAAGCTGAATTCCTTTCATCACGCGTACAGCACCGGCCAGGTCAGCGTGGAAATCGAG
hu. 42-E	1989	GTTCAACCAAGGCCAAGCTGAATTCCTTTCATCACGCGTACAGCACCGGCCAGGTCAGCGTGGAGATCGTG
rh. 57-E	1989	GTTCAACCAAGGCCAAGCTGAATTCCTTTCATCACGCGTACAGCACCGGCCAGGTCAGCGTGGAAATCGAG
hu. 40-E	1989	GTTCAACCAAGGCCAAGCTGAATTCCTTTCATCACGCGTACAGCACCGGCCAGGTCAGCGTGGAGATCGAG
AAV8-E	1989	CTTCAACCAAGTCAAAGCTGAATTCCTTTCATCACGCAATACAGCACCGGCCAGGTCAGCGTGGAAATTGAA
rh. 58-E	1989	GTTCAACCAAGGCCAAGCTGAATTCCTTTCATCACGCGTACAGCACCGGCCAGGTCAGCGTGGAGATCGAG
rh. 40-E	1989	GTTCAACCAAGGCCAAGCTGAATTCCTTTCATCACGCGTACAGCACCGGCCAGGTCAGCGTGGAGATCGAG
hu. 67-E	1989	GTTCAACCAAGGCCAAGCTGAATTCCTTTCATCACGCGTACAGCACCGGCCAGGTCAGCGTGGAGATCGAG
hu. 17-E	1989	CTTCAACCAAGGCCAAGCTGGCTTCCTTTCATCACGCGTACAGCACCGGCCAGGTCAGCGTGGAAATCGAA
hu. 6-E	1989	CTTCAAGTCAAGCCAAAGCTGGCTTCCTTTCATCACGCGTACAGCACCGGCCAGGTCAGCGTGGAAATCGAA
hu. 66-E	1989	GTTCAACCAAGGCCAAGCTGGCTTCCTTTCATCACGCGTACAGCACCGGCCAGGTCAGCGTGGAAATCGAG
rh. 38-E	1989	GTTCAACCAAGGCCAAGCTGGCTTCCTTTCATCACGCGTACAGCACCGGCCAGGTCAGCGTGGAAATCGAG
hu. 32-F	1983	TTTCAATAAGGACAAAGCTGAATTCCTTTCATCACCCAGTATTTCTACTGGCCAAAGTCAGCGTGGAGATTGAG
AAV9/hu	1983	CTTCAACCAAGGACAAAGCTGAATTCCTTTCATCACCCAGTATTTCTACTGGCCAAAGTCAGCGTGGAGATCGAG
hu. 31-F	1983	TTTCAATAAGGACAAAGCTGAATTCCTTTCATCACCCAGTATTTCTACTGGCCAAAGTCAGCGTGGAGATTGAG

FIG. 3C

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	2110	2120	2130	2140	2150	2160	2170
	..... ..... ..... ..... ..... ..... ..... ..... ..... .....						
AAV5	2017	TGGGAGCTCAAGAAGGAAAACTCCAAGAGGTGGAACCCAGAGATCCAGTACACAAACAACACTACACGACC					
AAV3-3-	2053	TGGGAGCTACAGAAAGAAAAACAGCAAAACGTTGGAAATCCAGAGATTCAGTACACTTCCAACACTACAACAAGT					
AAV4-4-	2047	TGGGAGATCCAGAAGGAGCGGTCCAACGCTGGAACCCCGAGGTCCAGTTACCTCCAACACTACGGACAGC					
AAV1-A-	2053	TGGGAGCTGCAGAAAGAAAAACAGCAAGCGCTGGAATCCCGAAGTGCAGTACACATCCAATTATGCACAAAT					
hu.46-A	2053	TGGGAGCTGCAGAAAGAAAAACAGCAAGCGCTGGAATCCCGAAGTGCAGTACACATCCAATTATGCACAAAT					
hu.48-A	2053	TGGGAGCTGCAGAAAGAAAAACAGCAAGCGCTGGAATCCCGAAGTGCAGTACACATCCAATTATGCACAAAT					
hu.44-A	2053	TGGGAGCTGCAGAAAGAAAAACAGCAAGCGCTGGAATCCCGAAGTGCAGTACACATCCAATTATGCACAAAT					
hu.43-A	2056	TGGGAGCTGCAGAAAGAAAAACAGCAAGCGCTGGAATCCCGAAGTGCAGTACACATCCAATTATGCACAAAT					
AAV6-A	2053	TGGGAGCTGCAGAAAGAAAAACAGCAAGCGCTGGAATCCCGAAGTGCAGTACACATCCAATTATGCACAAAT					
hu.34-B	2050	TGGGAGCTGCAGAAAGAAAAACAGCAAGCGCTGGAATCCCGAAGTGCAGTACACATCCAATTATGCACAAAT					
hu.47-B	2050	TGGGAGCTGCAGAAAGAAAAACAGCAAGCGCTGGAATCCCGAAGTGCAGTACACATCCAATTATGCACAAAT					
hu.29-B	2050	TGGGAGCTGCAGAAAGAAAAACAGCAAGCGCTGGAATCCCGAAGTGCAGTACACATCCAATTATGCACAAAT					
hu.63-B	2050	TGGGAGCTGCAGAAAGAAAAACAGCAAGCGCTGGAATCCCGAAGTGCAGTACACATCCAATTATGCACAAAT					
hu.56-B	2050	TGGGAGCTGCAGAAAGAAAAACAGCAAGCGCTGGAATCCCGAAGTGCAGTACACATCCAATTATGCACAAAT					
hu.45-B	2050	TGGGAGCTGCAGAAAGAAAAACAGCAAGCGCTGGAATCCCGAAGTGCAGTACACATCCAATTATGCACAAAT					
hu.57-B	2047	TGGGAGCTGCAGAAAGAAAAACAGCAAGCGCTGGAATCCCGAAGTGCAGTACACATCCAATTATGCACAAAT					
hu.35-B	2050	TGGGAGCTGCAGAAAGAAAAACAGCAAGCGCTGGAATCCCGAAGTGCAGTACACATCCAATTATGCACAAAT					
hu.58-B	2050	TGGGAGCTACAGAAAGGAGAAACAGCAACGCTGGAATCCCGAGATCCAGTACACTTCCAACACTACAACAAAT					
hu.28-B	2050	TGGGAGCTGCAGAAAGGAGAAACAGCAACGCTGGAATCCCGAGATCCAGTACACTTCCAACACTACAACAAAT					
hu.51-B	2050	TGGGAGCTGCAGAAAGGAGAAACAGCAACGCTGGAATCCCGAGATCCAGTACACTTCCAACACTACAACAAAT					
hu.19-B	2050	TGGGAGCTGCAGAAAGGAGAAACAGCAACGCTGGAATCCCGAGATCCAGTACACTTCCAACACTACAACAAAT					
hu.49-B	2050	TGGGAGCTGCAGAAAGGAGAAACAGCAACGCTGGAATCCCGAGATCCAGTACACTTCCAACACTACAACAAAT					
hu.52-B	2050	TGGGAGCTGCAGAAAGGAGAAACAGCAACGCTGGAATCCCGAGATCCAGTACACTTCCAACACTACAACAAAT					
hu.13-B	2050	TGGGAGCTGCAGAAAGGAGAAACAGCAACGCTGGAATCCCGAGATCCAGTACACTTCCAACACTACAACAAAT					
AAV2-B	2050	TGGGAGCTGCAGAAAGGAGAAACAGCAACGCTGGAATCCCGAGATCCAGTACACTTCCAACACTACAACAAAT					
hu.20-B	2050	TGGGAGCTGCAGAAAGGAGAAACAGCAACGCTGGAATCCCGAGATCCAGTACACTTCCAACACTACAACAAAT					
hu.24-B	2050	TGGGAGCTGCAGAAAGGAGAAACAGCAACGCTGGAATCCCGAGATCCAGTACACTTCCAACACTACAACAAAT					
hu.64-B	2050	TGGGAGCTGCAGAAAGGAGAAACAGCAACGCTGGAATCCCGAGATCCAGTACACTTCCAACACTACAACAAAT					

FIG. 3C

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hu. 27-B 2050 TGGAGCTGCAGAGGAGAAACAGCAACCGCTGGAATCCCGAAATTCAGTACACTTCCAACTACAACAAAT  
 hu. 21-B 2050 TGGAGCTGCAGAGGAGAAACAGCAACCGCTGGAATCCCGAAATTCAGTACACTTCCAACTACAACAAAT  
 hu. 22-B 2050 TGGAGCTGCAGAGGAGAAACAGCAACCGCTGGAATCCCGAAATTCAGTACACTTCCAACTACAACAAAT  
 hu. 23-B 2050 TGGAGCTGCAGAGGAGAAACAGCAACCGCTGGAATCCCGAAATTCAGTACACTTCCAACTACAACAAAT  
 hu. 7-C 2050 TGGAGCTGCAGAGGAGAAACAGCAACCGCTGGAATCCCGAAATTCAGTACACTTCCAACTACAACAAAT  
 hu. 61-C 2050 TGGAGCTGCAGAGGAGAAACAGCAACCGCTGGAATCCCGAAATTCAGTACACTTCCAACTACAACAAAT  
 rh. 56-C 2050 TGGAGCTGCAGAGGAGAAACAGCAACCGCTGGAATCCCGAAATTCAGTACACTTCCAACTACAACAAAT  
 hu. 9-C 2050 TGGAGCTGCAGAGGAGAAACAGCAACCGCTGGAATCCCGAAATTCAGTACACTTCCAACTACAACAAAT  
 hu. 54-C 2047 TGGAGCTGCAGAGGAGAAACAGCAACCGCTGGAATCCCGAAATTCAGTACACTTCCAACTACAACAAAT  
 hu. 53-C 2047 TGGAGCTGCAGAGGAGAAACAGCAACCGCTGGAATCCCGAAATTCAGTACACTTCCAACTACAACAAAT  
 hu. 60-C 2050 TGGAGCTGCAGAGGAGAAACAGCAACCGCTGGAATCCCGAAATTCAGTACACTTCCAACTACAACAAAT  
 hu. 55-C 2047 TGGAGCTGCAGAGGAGAAACAGCAACCGCTGGAATCCCGAAATTCAGTACACTTCCAACTACAACAAAT  
 hu. 2-C 2050 TGGAGCTGCAGAGGAGAAACAGCAACCGCTGGAATCCCGAAATTCAGTACACTTCCAACTACAACAAAT  
 hu. 1-C 2050 TGGAGCTGCAGAGGAGAAACAGCAACCGCTGGAATCCCGAAATTCAGTACACTTCCAACTACAACAAAT  
 hu. 18-C 2050 TGGAGCTGCAGAGGAGAAACAGCAACCGCTGGAATCCCGAAATTCAGTACACTTCCAACTACAACAAAT  
 hu. 3-C 2053 TGGAGCTGCAGAGGAGAAACAGCAACCGCTGGAATCCCGAAATTCAGTACACTTCCAACTACAACAAAT  
 hu. 25-C 2050 TGGAGCTGCAGAGGAGAAACAGCAACCGCTGGAATCCCGAAATTCAGTACACTTCCAACTACAACAAAT  
 hu. 15-C 2050 TGGAGCTGCAGAGGAGAAACAGCAACCGCTGGAATCCCGAAATTCAGTACACTTCCAACTACAACAAAT  
 hu. 16-C 2050 TGGAGCTGCAGAGGAGAAACAGCAACCGCTGGAATCCCGAAATTCAGTACACTTCCAACTACAACAAAT  
 hu. 11-C 2050 TGGAGCTGCAGAGGAGAAACAGCAACCGCTGGAATCCCGAAATTCAGTACACTTCCAACTACAACAAAT  
 hu. 10-C 2050 TGGAGCTGCAGAGGAGAAACAGCAACCGCTGGAATCCCGAAATTCAGTACACTTCCAACTACAACAAAT  
 hu. 4-C 2050 TGGAGCTGCAGAGGAGAAACAGCAACCGCTGGAATCCCGAAATTCAGTACACTTCCAACTACAACAAAT  
 rh. 54-D 2056 TGGAGCTGCAGAGGAGAAACAGCAACCGCTGGAATCCCGAAATTCAGTACACTTCCAACTACAACAAAT  
 rh. 48-D 2056 TGGAGCTGCAGAGGAGAAACAGCAACCGCTGGAATCCCGAAATTCAGTACACTTCCAACTACAACAAAT  
 rh. 55-D 2056 TGGAGCTGCAGAGGAGAAACAGCAACCGCTGGAATCCCGAAATTCAGTACACTTCCAACTACAACAAAT  
 rh. 62-D 2056 TGGAGCTGCAGAGGAGAAACAGCAACCGCTGGAATCCCGAAATTCAGTACACTTCCAACTACAACAAAT  
 AAV7-D 2056 TGGAGCTGCAGAGGAGAAACAGCAACCGCTGGAATCCCGAAATTCAGTACACTTCCAACTACAACAAAT  
 rh. 52-E 2059 TGGAGCTGCAGAGGAGAAACAGCAACCGCTGGAATCCCGAAATTCAGTACACTTCCAACTACAACAAAT  
 rh. 51-E 2059 TGGAGCTGCAGAGGAGAAACAGCAACCGCTGGAATCCCGAAATTCAGTACACTTCCAACTACAACAAAT  
 hu. 39-E 2059 TGGAGCTGCAGAGGAGAAACAGCAACCGCTGGAATCCCGAAATTCAGTACACTTCCAACTACAACAAAT

FIG. 3C



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rh.53-E	2059	TGGAGCTGCAGAAAGGAGAACAGCAAGCGCTGGAACCCAGAGATTTCAGTATACTTCCAACTACTACAAAT	2180	2190	2200	2210	2220	2230	2240
hu.37-E	2059	TGGAGCTGCAGAAAGGAGAACAGCAACCGCTGGAACCCAGAGATTTCAGTACACTTCAAACCTACTACAAAT	..... ..... ..... ..... ..... ..... ..... ..... ..... .....						
rh.43-E	2053	TGGAGCTACAGAAAGGAAAACAGCAAGCGCTGGAACCCGAGATCCAGTACACTCCAACCTACTACAAAT	2087						
rh.50-E	2059	TGGAGCTGCAGAAAGGAGAACAGCAAGCGCTGGAGCCAGAGATTTCAGTATACTTCCAACCTACTACAAAT	2123						
rh.49-E	2059	TGGAGCTGCAGAAAGGAGAACAGCAAGCGCTGGAACCCAGAGATTTCAGTATACTTCCAACCTACTACAAAT	2117						
rh.61-E	2059	TGGAGCTGCAGAAAGGAGAACAGCAAGCGCTGGAACCCAGAGATTTCAGTATACTTCCAACCTACTACAAAT	2123						
hu.41-E	2059	TGGAGCTGCAGAAAGGAGAACAGCAACCGTTGGAACCCAGAGATTTCAGTACACTTCAAACCTACTACAAAT	2123						
rh.64-E	2059	TGGAGCTGCAGAAAGGAGAACAGCAAGCGGAGAACCCAGAGATTTCAGTATACTTCCAACCTACTACAAAT							
hu.42-E	2059	TGGAGCTGCAGAAAGGAGAACAGCAAGCGCTGGAACCCAGAGATTTCAGTATACTTCCAACCTACTACAAAT							
rh.57-E	2059	TGGAGCTGCAGAAAGGAGAACAGCAAGCGCTGGAACCCAGAGATTTCAGTACACTTCAAACCTACTACAAAT							
hu.40-E	2059	TGGAGCTGCAGAAAGGAGAACAGCAACCGCTGGAACCCAGAGATTTCAGTACACTTCAAACCTACTACAAAT							
AAV8-E	2059	TGGAGCTGCAGAAAGGAAAACAGCAAGCGCTGGAACCCGAGATCCAGTACACTTCCAACTACTACAAAT							
rh.58-E	2059	TGGAGCTGCAGAAAGGAGAACAGCAAGTGTCTGGAACCCAGAGATTTCAGTATACTTCCAACCTACTACAAAT							
rh.40-E	2059	TGGAGCTGCAGAAAGGAGAACAGCAAGCGATGGAACCCAGAAAATTTCAGTACACTTCCAACCTACTACAAAT							
hu.67-E	2059	TGGAGCTGCAGAAAGGAGAACAGCAACCGCTGGAACCCAGAGATTTCAGTACACTTCAAACCTACTACAAAT							
hu.17-E	2059	TGGAGCTGCAGAAAAGAGAACAGCAAGCGCTGGAACCCAGAGATTTCAGTATACTTCCAACCTATAACAAAT							
hu.6-E	2059	TGGAGCTGCAGAAAAGAGAACAGCAAGCGCTGGAACCCAGAGATTTCAGTATACTTCCAACCTACTACAAAT							
hu.66-E	2059	TGGAGCTGCAGAAAGGAGAACAGCAACCGCTGGAACCCAGAGATTTCAGTACACTTCAAACCTACTACAAAT							
rh.38-E	2059	TGGAGCTGCAGAAAGGAGAACAGCAACCGCTGGAACCCAGAGATTTCAGTACACTTCAAACCTACTACAAAT							
hu.32-F	2053	TGGAGCTGCAGAAAGGAAAACAGCAAGCGCTGGAACCCGAGATCCAGTACACTTCCAACCTATTACAAAT							
AAV9/hu	2053	TGGAGCTGCAGAAAGGAAAACAGCAAGCGCTGGAACCCGAGATCCAGTACACTTCCAACCTATTACAAAT							
hu.31-F	2053	TGGAGCTGCAGAAAGGAAAACAGCAAGCGCTGGAACCCGAGATCCAGTACACTTCCAACCTATTACAAAT							
AAV5	2087	.... ..... ..... ..... ..... ..... ..... ..... ..... .....							
AAV3-3	2123	CCCAAGTTTGTGGACTTTGCCCCGGACAGCACCGGGGAATACAGAAACCACAGACCTATCGGAACCCGATA							
AAV4-4	2117	CTGTTAATGTGGACTTTACTGTAGACACTAATGGTGTTTATAGTGAACCTCGCCCTATTGGAACCCGGTA							
AAV1-A	2123	AAACTCTCTGTTGTGGCTCCCGATGCGGCTGGGAAAATACACTGAGCCTAGGGCTATCGGTACCCGCTA							
hu.46-A	2123	CTGCCAACGTTGATTTTACTGTGGACAACAATGGACTTTTATACTGAGCCTCGCCCATTTGGCACCCCGTTA							

FIG. 3CH

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hu.48-A	2123	CTGCCAACGTTGATTTTACTGTGGACAACAATGGACTTTTATCTAGAGCCCTGCCCCCATTTGGCACCCGTTA
hu.44-A	2123	CTGCCAACGTTGATTTTACTGTGGACAACAATGGACTTTTATCTAGAGCCCTGCCCCCATTTGGCACCCGTTA
hu.43-A	2126	CTGCCAGCGTTGATTTTACTGTGGACAACAATGGACTTTTATCTAGAGCCCTGCCCCCATTTGGCACCCGTTA
AAV6-A	2123	CTGCCAACGTTGATTTTACTGTGGACAACAATGGACTTTTATCTAGAGCCCTGCCCCCATTTGGCACCCGTTA
hu.34-B	2120	CTGTTAATGTGGACTTTACTGTGGACACTAATGGCGTGTATTTCAGAGCCCTGCCCCCATTTGGCACCCAGATA
hu.47-B	2120	CTGTTAATGTGGACTTTACTGTGGACACTAATGGCGTGTATTTCAGAGCCCTGCCCCCATTTGGCACCCAGATA
hu.29-B	2120	CTGTTAATGTGGACTTTACTGTGGACACTAATGGCGTGTATTTCAGAGCCCTGCCCCCATTTGGCACCCAGATA
hu.63-B	2120	CTGTTAATGTGGACTTTACTGTGGACACTAATGGTGTGTATTTCAGAGCCCTGCCCCCATTTGGCACCCAGTA
hu.56-B	2120	CTGTTAATGTGGACTTTACTGTGGACACTAATGGGCGTGTATTTCAGAGCCCTGCCCCCATTTGGCACCCAGATA
hu.45-B	2120	CTGTTAATGTGGACTTTACTGTGGACACTAATGGGCGTGTATTTCAGAGCCCTGCCCCCATTTGGCACCCAGATA
hu.57-B	2117	CTGTTAATGTGGACTTTACTGTGGACACTAATGGGCGTGTATTTCAGAGCCCTGCCCCCATTTGGCACCCAGATA
hu.35-B	2120	CTGTTAATGTGGACTTTACTGTGGACACTAATGGGCGTGTATTTCAGAGCCCTGCCCCCATTTGGCACCCAGATA
hu.58-B	2120	CTGTTAATGTGGACTTTACTGTGGACACTAATGGTGTGTATTTCAGAGCCCTGCCCCCATTTGGCACCCAGATA
hu.28-B	2120	CTGTTAATGTGGACTTTACTGTGGACACTAATGGGCGTGTATTTCAGAGCCCTGCCCCCATTTGGCACCCAGATA
hu.51-B	2120	CTGTTAATGTGGACTTTACTGTGGACACTAATGGGCGTGTATTTCAGAGCCCTGCCCCCATTTGGCACCCAGATA
hu.19-B	2120	CTGTTAATGTGGACTTTACTGTGGACACTAATGGTGTGTATTTCAGAGCCCTGCCCCCATTTGGCACCCAGATA
hu.49-B	2120	CTGTTAATGTGGACTTTACTGTGGACACTAATGGTGTGTATTTCAGAGCCCTGCCCCCATTTGGCACCCAGATA
hu.52-B	2120	CTGTTAATGTGGACTTTACTGTGGACACTAATGGGCGTGTATTTCAGAGCCCTGCCCCCATTTGGCACCCAGATA
hu.13-B	2120	CTGTTAATGTGGACTTTACTGTGGACACTAATGGGCGTGTATTTCAGAGCCCTGCCCCCATTTGGCACCCAGATA
AAV2-B	2120	CTGTTAATGTGGACTTTACTGTGGACACTAATGGGCGTGTATTTCAGAGCCCTGCCCCCATTTGGCACCCAGATA
hu.20-B	2120	CTGTTAATGTGGACTTTACTGTGGACACTAATGGTGTGTATTTCAGAGCCCTGCCCCCATTTGGCGCCAGATA
hu.24-B	2120	CTGTTAATGTGGACTTTACTGTGGACACTAATGGTGTGTATTTCAGAGCCCTGCCCCCATTTGGCACCCAGATA
hu.64-B	2120	CTGTTAATGTGGACTTTACTGTGGACACTAATGGTGTGTATTTCAGAGCCCTGCCCCCATTTGGCACCCAGATA
hu.27-B	2120	CTGTTAATGTGGACTTTACTGTGGACACTAATGGTGTGTATTTCAGAGCCCTGCCCCCATTTGGCACCCAGATA
hu.21-B	2120	CTGTTAATGTGGACTTTACTGTGGACACTAATGGTGTGTATTTCAGAGCCCTGCCCCCATTTGGCACCCAGATA
hu.22-B	2120	CTGTTAATGTGGACTTTACTGTGGACACTAATGGTGTGTATTTCAGAGCCCTGCCCCCATTTGGCACCCAGATA
hu.23-B	2120	CTGTTAATGTGGACTTTACTGTGGACACTAATGGTGTGTATTTCAGAGCCCTGCCCCCATTTGGCACCCAGATA
hu.7-C	2120	CTGTTAATGTGGACTTTACTGTGGACACTAATGGGCGTGTATTTCAGAGCCCTGCCCCCATTTGGCACCCAGATA
hu.61-C	2120	CTGTTAATGTGGACTTTACTGTGGACACTAATGGTGTGTATTTCAGAGCCCTGCCCCCATTTGGCACCCAGATA
rh.56-C	2120	CTGTTAATGTGGACTTTACTGTGGACACTAATGGGCGTGTATTTCAGAGCCCTGCCCCCATTTGGCACCCAGATA

FIG. 3C1

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hu. 9-C	2120	CTGTTAATGTGGACTTTACTGTGGACACTAATGGTGTGTATTTCAGAGCCTTGCCCCCATTTGGCACCAGATA
hu. 54-C	2117	CTGTTAATGTGGACTTTACTGTGGACACTAATGGTGTGTATTTCAGAGCCTTGCCCCCATTTGGCACCAGATA
hu. 53-C	2117	CTGTTAATGTGGACTTTACTGTGGACACTAATGGTGTGTATTTCAGAGCCTTGCCCCCATTTGGCACCAGATA
hu. 60-C	2120	CTGTTAATGTGGACTTTACTGTGGACACTAATGGTGTGTATTTCAGAGCCTTGCCCCCATTTGGCACCAGATA
hu. 55-C	2117	CTGTTAATGTGGACTTTACTGTGGACACTAATGGTGTGTATTTCAGAGCCTTGCCCCCATTTGGCACCAGATA
hu. 2-C	2120	CTGTTAATGTGGACTTTACTGTGGACACTAATGGTGTGTATTTCAGAGCCTTGCCCCCATTTGGCACCAGATA
hu. 1-C	2120	CTGTTAATGTGGACTTTACTGTGGACACTAATGGTGTGTATTTCAGAGCCTTGCCCCCATTTGGCACCAGATA
hu. 18-C	2120	CTGTTAATGTGGACTTTACTGTGGACACTAATGGTGTGTATTTCAGAGCCTTGCCCCCATTTGGCACCAGATA
hu. 3-C	2123	CTGTTAATGTGGACTTTACTGTGGACACTAATGGTGTGTATTTCAGAGCCTTGCCCCCATTTGGCACCAGATA
hu. 25-C	2120	CTGTTAATGTGGACTTTACTGTGGACACTAATGGTGTGTATTTCAGAGCCTTGCCCCCATTTGGCACCAGATA
hu. 15-C	2120	CTGTTAATGTGGACTTTACTGTGGACACTAATGGTGTGTATTTCAGAGCCTTGCCCCCATTTGGCACCAGATA
hu. 16-C	2120	CTGTTAATGTGGACTTTACTGTGGACACTAATGGTGTGTATTTCAGAGCCTTGCCCCCATTTGGCACCAGATA
hu. 11-C	2120	CTGTTAATGTGGACTTTACTGTGGACACTAATGGTGTGTATTTCAGAGCCTTGCCCCCATTTGGCACCAGATA
hu. 10-C	2120	CTGTTAATGTGGACTTTACTGTGGACACTAATGGTGTGTATTTCAGAGCCTTGCCCCCATTTGGCACCAGATA
hu. 4-C	2120	CTGTTAATGTGGACTTTACTGTGGACACTAATGGTGTGTATTTCAGAGCCTTGCCCCCATTTGGCACCAGATA
rh. 54-D	2126	AGACTGGTGTGGACTTTGCCGTTGACAGCCAGGGTGTATTCTGAGCCTTGCCCCCATTTGGTACTCGTTA
rh. 48-D	2126	AGACTGGTGTGGACTTTGCCGTTGACAGCCAGGGTGTATTCTGAGCCTTGCCCCCATTTGGTACTCGTTA
rh. 55-D	2126	AGACTGGTGTGGACTTTGCCGTTGACAGCCAGGGTGTATTCTGAGCCTTGCCCCCATTTGGTACTCGTTA
rh. 62-D	2126	AGACTGGTGTGGACTTTGCCGTTGACAGCCAGGGTGTATTCTGAGCCTTGCCCCCATTTGGTACTCGTTA
AAV7-D	2126	AGACTGGTGTGGACTTTGCCGTTGACAGCCAGGGTGTATTCTGAGCCTTGCCCCCATTTGGCACCAGATA
rh. 52-E	2129	CTACAAATGTGGACTTTGCTGTTAATACTGAGGGTGTATTCTGAGCCTTGCCCCCATTTGGCACCAGATA
rh. 51-E	2129	CTACAAATGTGGACTTTGCTGTTAATACTGAGGGTGTATTCTGAGCCTTGCCCCCATTTGGCACCAGATA
hu. 39-E	2129	CTACAAATGCGGACTTTGCTGTTAATACTGAGGGTGTATTCTGAGCCTTGCCCCCATTTGGCACCAGATA
rh. 53-E	2129	CTACAAATGTGGACTTTGCTGTTAATACTGAGGGTGTATTCTGAGCCTTGCCCCCATTTGGCACCAGATA
hu. 37-E	2129	CTACAAATGTGGACTTTGCTGTTAATACTGAGGGTGTATTCTGAGCCTTGCCCCCATTTGGTACTCGTTA
rh. 43-E	2123	CTACAAAGTGTGGACTTTGCTGTTAATACTGAGAGCGGTGTACTCTGAACCCCGCCCCCATTTGGCACCAGATA
rh. 50-E	2129	CTACAAATGTGGACTTTGCTGTTAATACTGAGGGTGTATTCTGAGCCTTGCCCCCATTTGGCACCAGATA
rh. 49-E	2129	CTACAAATGTGGACTTTGCTGTTAATACTGAGGGTGTATTCTGAGCCTTGCCCCCATTTGGCACCAGATA
rh. 61-E	2129	CTACAAATGTGGACTTTGCTGTTAATACTGAGGGTGTATTCTGAGCCTTGCCCCCATTTGGCACCAGATA
hu. 41-E	2129	CTACAAATGTGGACTTTGCTGTTAATACTGAGGGTGTATTCTGAGCCTTGCCCCCATTTGGTACTCGTTA

FIG. 3C

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rh. 64-E	2129	CTACAAATGTGGACTTTGCTGTTAATACTAGGGTGTTTACTCTGAGCCTCGCCCCATTGGCACTCGTTA
hu. 42-E	2129	CTACAAATGTGGACTTTGCTGTCAATACAGAGGAACTTATTCTGAGCCTCGCCCCATTGGTACTCGTTA
rh. 57-E	2129	CTACAAATGTGGACTTTGCTGTTAATACTAGGGTGTTTACTCTGAGCCTCGCCCCATTGGCACTCGTTA
hu. 40-E	2129	CTACAAATGTGGACTTTGCTGTCAATACAGAGGAACTTATTCTGAGCCTCGCCCCATTGGTACTCGTTA
AAV8-E	2129	CTACAAGTGTGGACTTTGCTGTTAATAACAGAGGCGTGTAATCTGAACCCCGCCCATTTGGCACCCGTTA
rh. 58-E	2129	CTACAAATGTGGACTTTGCTGTTAATACTAGGGTGTTTACTCTGAGCCTCGCCCCATTGGCACTCGTTA
rh. 40-E	2129	CTACAAATGTGGACTTTGCTGTCAATTCTGAGGGTACATAATTCAGAGCCTCGCCCCATTGGTACTCGTTA
hu. 67-E	2129	CTACAAATGTGGACTTTGCTGTCAATACAGAGGAACTTATTCTGAGCCTCGCCCCATTGGTACTCGTTA
hu. 17-E	2129	CTGTTAATGTGGACTTTACTGTGACACTAATGGTGTTATTCAGAGCCTCGCCCCATTGGCACCCAGATA
hu. 6-E	2129	CTACAAATGTGGACTTTGCTGTCAATACTGAGGGTACTTATTCTGAGCCTCGCCCCATTGGCACCCGTTA
hu. 66-E	2129	CTACAAATGTGGACTTTGCTGTCAATACAGAGGAACTTATTCTGAGCCTCGCCCCATTGGTACTCGTTA
rh. 38-E	2129	CTACAAATGTGGACTTTGCTGTCAATACAGAGGAACTTATTCTGAGCCTCGCCCCATTGGTACTCGTTA
hu. 32-F	2123	CTAATAATGTTGAATTTGCTGTTAATACTGAAGGTGTATATAGTGAACCCCGCCCATTTGGCACCCAGATA
AAV9/hu	2123	CTAATAATGTTGAATTTGCTGTTAATACTGAAGGTGTATATAGTGAACCCCGCCCATTTGGCACCCAGATA
hu. 31-F	2123	CTAATAATGTTGAATTTGCTGTTAGTACTGAAGGTGTATATAGTGAACCCCGCCCATTTGGCACCCAGATA

	2250	2260
	.... .... .... ....	
AAV5	2157	CCTTACCCGACCCCTT----
AAV3-3	2193	TCTCACACGAAACTTG----
AAV4-4	2187	CCTCACCCACCACTTGTA--
AAV1-A	2193	CCTTACCCGTCCTCCCTGTAA-
hu. 46-A	2193	CCTTACCCGTCCTCCCTGTAA-
hu. 48-A	2193	CCTTACCCGTCCTCCCTGTAA-
hu. 44-A	2193	CCTTACCCGTCCTCCCTGTAA-
hu. 43-A	2196	CCTTACCCGTCCTCCCTGTAA-
AAV6-A	2193	CCTCACCCGTCCTCCCTGTAA-
hu. 34-B	2190	CCTGACTCGTAATCTGTAA-
hu. 47-B	2190	CCTGACTCGTAATCTGTAA-
hu. 29-B	2190	CCTGACTCGTAATCTGTAA-

FIG. 3CK

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hu.63-B	2190	CCTGACTCGTAATCTGTAA-
hu.56-B	2190	CCTGACTCGTAATCTGTAA-
hu.45-B	2190	CCTGACTCGTAATCTGTAA-
hu.57-B	2187	CCTGACTCGTAATCTGTAA-
hu.35-B	2190	CCTGACTCGTAATCTGTAA-
hu.58-B	2190	CCTGACTCGTAATCTGTAA-
hu.28-B	2190	CCTGACTCGTAATCTGTAA-
hu.51-B	2190	CCTGACTCGTAATCTGTAA-
hu.19-B	2190	CCTGACTCGTAATCTGTAA-
hu.49-B	2190	CCTGACTCGTAATCTGTAA-
hu.52-B	2190	CCTGACTCGTAATCTGTAA-
hu.13-B	2190	CCTGACTCGTAATCTGTAA-
AAV2-B	2190	CCTGACTCGTAATCTGTAA-
hu.20-B	2190	CCTGACTCGTAATCTGTAA-
hu.24-B	2190	CCTGACTCGTAATCTGTAA-
hu.64-B	2190	CCTGACTCGTAATCTGTAA-
hu.27-B	2190	CCTGACTCGTAATCTGTAA-
hu.21-B	2190	CCTGACTCGTAATCTGTAA-
hu.22-B	2190	CCTGACTCGTAATCTGTAA-
hu.23-B	2190	CCTGACTCGTAATCTGTAA-
hu.7-C	2190	CCTGACTCGTAATCTGTAA-
hu.61-C	2190	CCTGACTCGTAATCTGTAA-
rh.56-C	2190	CCTGACTCGTAATCTGTAA-
hu.9-C	2190	CCTGACTCGTAATCTGTAA-
hu.54-C	2187	CCTGACTCGTAATCTGTAA-
hu.53-C	2187	CCTGACTCGTAATCTGTAA-
hu.60-C	2190	CCTGACTCGTAATCTGTAA-
hu.55-C	2187	CCTGACTCGTAATCTGTAA-
hu.2-C	2190	CCTGACTCGTAATCTGTAA-
hu.1-C	2190	CCTGACTCGTAATCTGTAA-

FIG. 3CL

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hu.18-C	2190	CCCGACTCGTAATCTGTAA-
hu.3-C	2193	CCTGACTCGTAATCTGTAA-
hu.25-C	2190	CCTGACTCGTAATCTGTAA-
hu.15-C	2190	CCTGACTCGTAATCTGTAA-
hu.16-C	2190	CCTGACTCGTAATCTGTAA-
hu.11-C	2190	CCTGACTCGTAATCTGTAA-
hu.10-C	2190	CCTGACTCGTAATCTGTAA-
hu.4-C	2190	CCTGACTCGTAATCTGTAA-
rh.54-D	2196	CCTCACCCGTAATCTGTAA-
rh.48-D	2196	CCTCACCCGTAATCTGTAA-
rh.55-D	2196	CCTCACCCGTAATCTGTAA-
rh.62-D	2196	CCTCACCCGTAATCTGTAA-
AAV7-D	2196	CCTCACCCGTAATCTGTAA-
rh.52-E	2199	CCTCACCCGTAATCTGTAA-
rh.51-E	2199	CCTCACCCGTAATCTGTAA-
hu.39-E	2199	CCTCACCCGTAATCTGTAA-
rh.53-E	2199	CCCCACCCGTAATCTGTAA-
hu.37-E	2199	CCTCACCCGTAATCTGTAA-
rh.43-E	2193	CCTCACCCGTAATCTGTAA-
rh.50-E	2199	CCTCACCCGTAATCTGTAA-
rh.49-E	2199	CCTCACCCGTAATCTGTAA-
rh.61-E	2199	CCTCACCCGTAATCTGTAA-
hu.41-E	2199	CCTCACCCGTAATCTGTAA-
rh.64-E	2199	CCTCACCCGTAATCTGTAA-
hu.42-E	2199	CCTCACCCGTAATCTGTAA-
rh.57-E	2199	CCTCACCCGTAATCTGTAA-
hu.40-E	2199	CCTCACCCGTAATCTGTAA-
AAV8-E	2199	CCTCACCCGTAATCTGTAA-
rh.58-E	2199	CCTCACCCGTAATCTGTAA-
rh.40-E	2199	TCTGACACGTAATCTGTAA-

FIG. 3CM

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hu.67-E	2199	CCTCACCCCGTAATCTGTAA-
hu.17-E	2199	CCTGACTCGTAATCTGTAA-
hu.6-E	2199	CCTCACCCCGTAACCTGTAA-
hu.66-E	2199	CCTCACCCCGTAATCTGTAA-
rh.38-E	2199	CCTCACCCCGTAATCTGTAA-
hu.32-F	2193	CCTGACTCGTAATCTGTAA-
AAV9/hu	2193	CCTGACTCGTAATCTGTAA-
hu.31-F	2193	CCTGACTCGTAATCTGTAA-

FIG. 3CN



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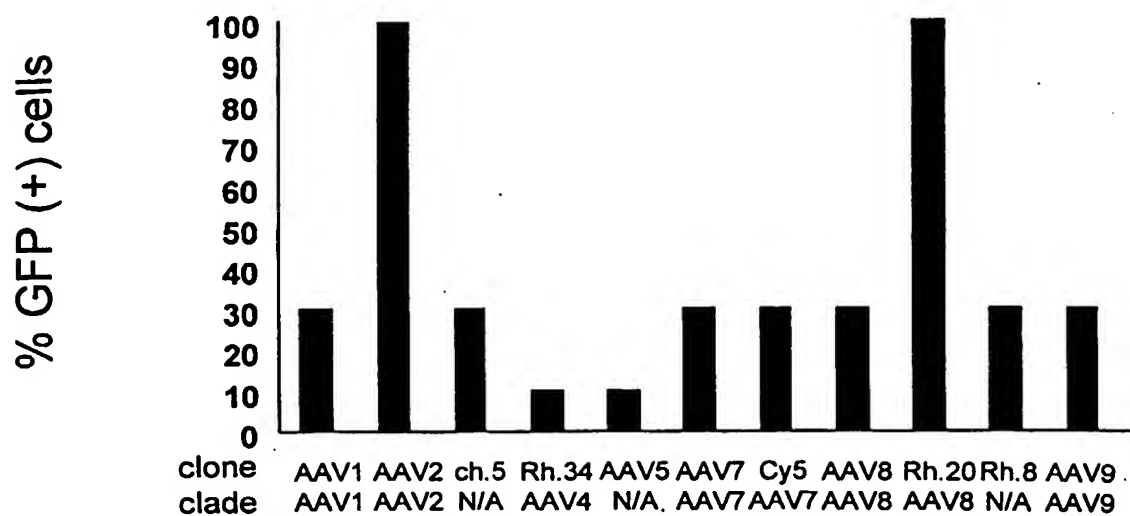


Fig. 4A

In Vitro

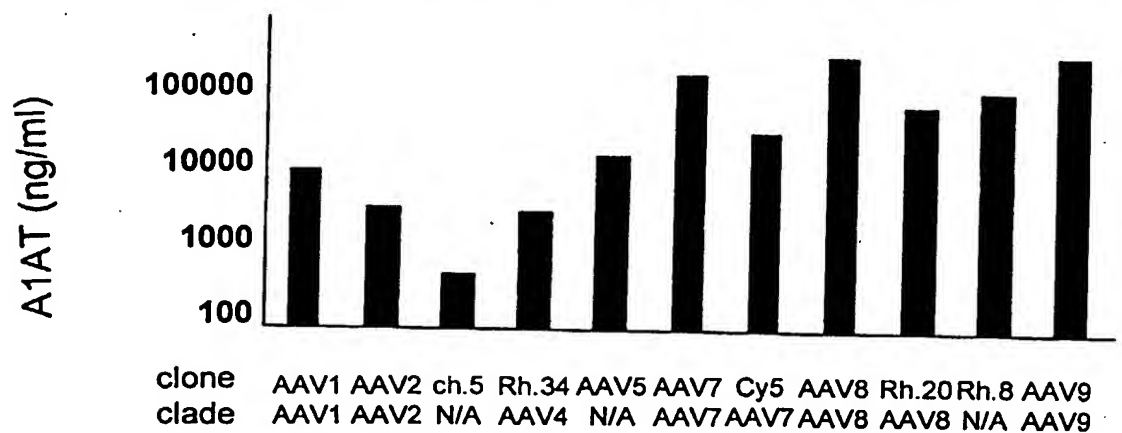


Fig. 4B

Liver

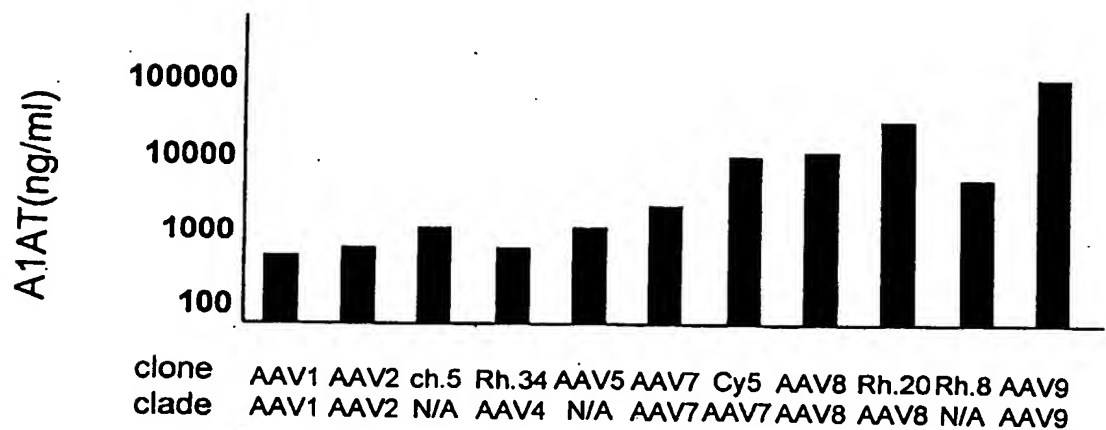


Fig. 4C

Lung

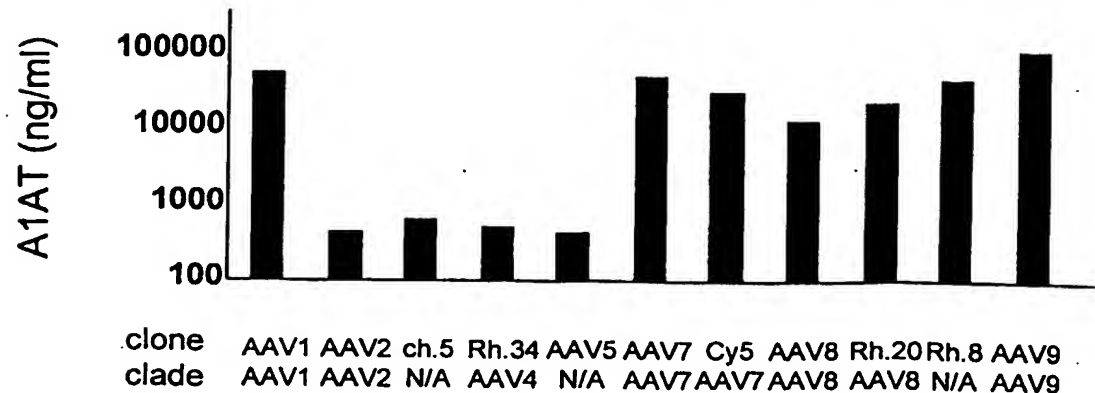


Fig. 4D

Muscle